



# South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178  
(909) 396-2000 • www.aqmd.gov

October 7, 2010

Mr. Art Seiden  
Safety Engineer  
California Institute of Technology  
1200 E. California Blvd.  
Pasadena, CA 91125

**SUBJECT:** Title V Facility Permit Revision (Facility ID: 800387)

Dear Mr. Seiden:

Please find attached the revised Title Page, Table of Contents, and Section D of your Title V Facility Permit. The revised sections reflect the approval of the permit revision requested in your Application No. 502626. The proposed permit revision was submitted to EPA for 45-day review on August 17, 2010. This permit revision includes the addition of an existing emergency internal combustion engine with diesel particulate filter and the removal of an old emergency internal combustion engine as follows:

Equipment	Application No.	Permit No.	Permit Type
Internal Combustion Engine with Diesel Particulate Filter	502626	G10255	P/O
Internal Combustion Engine-- <i>Removed</i>	222133	D43676	P/O

Please review the attached sections carefully. Insert the enclosed sections into your Title V Facility Permit and discard the earlier versions. Questions concerning changes to your permit should be directed to Ms. Vicky Lee at (909) 396-2284.

Sincerely,

Brian L. Yeh  
Senior Manager  
General Commercial and Energy Team  
Engineering and Compliance

BLY:AYL:RGC:VL  
Attachment

cc: Gerardo Rios, EPA Region IX

*Cleaning the air that we breathe...*



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT  
21865 Copley Drive, Diamond Bar, CA 91765

Title Page  
Facility ID: 800387  
Revision #: 9  
Date: October 07, 2010

## FACILITY PERMIT TO OPERATE

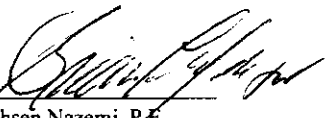
**CAL INST OF TECH  
650 S WILSON  
PASADENA, CA 91106**

### NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR A COPY THEREOF MUST BE KEPT AT THE LOCATION FOR WHICH IT IS ISSUED.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT SHALL NOT BE CONSTRUED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF ANY OTHER FEDERAL, STATE OR LOCAL GOVERNMENTAL AGENCIES.

Barry R. Wallerstein, D. Env.  
EXECUTIVE OFFICER

By   
Mohsen Nazemi, P.E.  
Deputy Executive Officer  
Engineering & Compliance



**FACILITY PERMIT TO OPERATE  
CAL INST OF TECH**

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## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

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### **Facility Equipment and Requirements (Section D)**

This section consists of a table listing all permitted equipment at the facility, facility wide requirements, all individual Permits to Construct and Permits to Operate issued to various equipment at the facility, and Rule 219-exempt equipment subject to source-specific requirements. Each permit and Rule 219-exempt equipment will list operating conditions including periodic monitoring requirements, and applicable emission limits and requirements that the equipment is subject to. Also included is the rule origin and authority of each emission limit and permit condition.



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMITTED EQUIPMENT LIST

THE FOLLOWING IS A LIST OF ALL PERMITS TO CONSTRUCT AND PERMITS TO OPERATE AT THIS FACILITY:

Application number	Permit to Operate number	Equipment description
222134	D22764	I C E (50-500 HP) EM ELEC GEN-DIESEL
267420	D58610	I C E (50-500 HP) EM ELEC GEN-DIESEL
271879	D64372	I C E (50-500 HP) EM ELEC GEN-DIESEL
292810	D83124	I C E (50-500 HP) EM ELEC GEN-DIESEL
304633	D91737	I C E (50-500 HP) EM ELEC GEN-DIESEL
335460	F15249	I C E (50-500 HP) EM ELEC GEN-DIESEL
346594	F18063	I C E (50-500 HP) EM ELEC GEN-DIESEL
360776	F41928	I C E (50-500 HP) EM ELEC GEN-DIESEL
385178	F41929	I C E (50-500 HP) EM ELEC GEN-DIESEL
385441	F39728	I C E (50-500 HP) EM ELEC GEN-DIESEL
390098	F45731	I C E (>500 HP) EM ELEC GEN-DIESEL
404167	F53900	I C E (50-500 HP) EM ELEC GEN-DIESEL
404168	F54055	I C E (50-500 HP) EM ELEC GEN-DIESEL
408837	F76394	I C E (>500 HP) EM ELEC GEN-DIESEL
430597	F76393	I C E (50-500 HP) EM ELEC GEN-DIESEL
449574	F84102	I C E (50-500 HP) EM ELEC GEN-DIESEL
441638	N16673 <i>Note: See A/N 492430, below.</i>	SERV STAT STORAGE & DISPENSING GASOLINE
404164	F53892	BOILER (>50 MMBTU/HR) COMB GAS-DISTILL
404165	F53899	BOILER (>50 MMBTU/HR) COMB GAS-DISTILL
402552	F92373	TURBINE ENGINE (<=50MW) NAT GAS ONLY
402554	F92374	SELECTIVE CATALYTIC REDUCTION
408819	F92439	STORAGE TANK AMMONIA
473777	F94315	I C E (50-500 HP) EM ELECT GEN-DIESEL
476877	F97113	I C E (50-500 HP) EM ELECT GEN-DIESEL
492430	N23305	SERV STAT STORAGE & DISPENSING GASOLINE
473550	G6134	I C E (50-500 HP) EM ELECT GEN-DIESEL
406489	G6133	I C E (>500 HP) EM ELECT GEN-DIESEL
446735	G6772	BOILER (>50 MMBTU/HR) COMB GAS-DISTILL
507240	G8582	SPRAY BOOTH PAINT AND SOLVENT
502626	G10255	I C E (50-500 HP) EM ELEC GEN-DIESEL
509331		BOILER (>50 MMBTU/HR) NAT GAS ONLY
509333		BOILER (>50 MMBTU/HR) NAT GAS ONLY
509334		BOILER (>50 MMBTU/HR) NAT GAS ONLY



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## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

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**NOTE:** EQUIPMENT LISTED ABOVE THAT HAVE NO CORRESPONDING PERMITS TO OPERATE NUMBER ARE ISSUED PERMITS TO CONSTRUCT. THE ISSUANCE OR DENIAL OF THEIR PERMITS TO OPERATE IS SUBJECT TO ENGINEERING FINAL REVIEW. ANY OTHER APPLICATIONS THAT ARE STILL BEING PROCESSED AND HAVE NOT BEEN ISSUED PERMITS TO CONSTRUCT OR PERMITS TO OPERATE WILL NOT BE FOUND IN THIS TITLE V PERMIT.



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

### **FACILITY WIDE CONDITION(S)**

**Condition(s):**

1. EXCEPT FOR OPEN ABRASIVE BLASTING OPERATIONS, THE OPERATOR SHALL NOT DISCHARGE INTO THE ATMOSPHERE FROM ANY SINGLE SOURCE OF EMISSIONS WHATSOEVER ANY AIR CONTAMINANT FOR A PERIOD OR PERIODS AGGREGATING MORE THAN THREE MINUTES IN ANY ONE HOUR WHICH IS:
  - A. AS DARK OR DARKER IN SHADE AS THAT DESIGNATED NO. 1 ON THE RINGELMANN CHART, AS PUBLISHED BY THE UNITED STATES BUREAU OF MINES; OR
  - B. OF SUCH OPACITY AS TO OBSCURE AN OBSERVER'S VIEW TO A DEGREE EQUAL TO OR GREATER THAN DOES SMOKE DESCRIBED IN SUBPARAGRAPH (A) OF THIS CONDITION.  
[RULE 401]
2. THE OPERATOR SHALL NOT PURCHASE ANY DIESEL FUEL UNLESS THE FUEL IS LOW SULFUR DIESEL FOR WHICH THE SULFUR CONTENT SHALL NOT EXCEED 15 PPMV BY WEIGHT AS SUPPLIED BY THE SUPPLIER.  
[RULE 431.2, RULE 1470]5
3. THE OPERATOR SHALL NOT USE NATURAL GAS CONTAINING SULFUR COMPOUNDS, CALCULATED AS H<sub>2</sub>S, IN EXCESS OF 16 PPMV. THE OPERATOR SHALL NOT USE OR SELL GASEOUS FUEL CONTAINING SULFUR COMPOUNDS IN EXCESS OF 40 PPMV CALCULATED AS HYDROGEN SULFIDE AVERAGED OVER FOUR HOURS.  
[RULE 431.1]



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMIT TO OPERATE

Permit No. D22764  
A/N 222134

#### Equipment Description:

INTERNAL COMBUSTION ENGINE, CUMMINS, MODEL NO. NT-855-GS, SERIAL NO. 30103934, DIESEL FUELED, EMERGENCY ELECTRICAL GENERATOR (BRAUN LAB), 6 CYLINDERS, 4 CYCLES, TURBOCHARGED, AFTERCOOLED, 355 BHP.

#### Conditions:

1. OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]
2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. THE IGNITION TIMING OF THIS ENGINE MUST BE INSPECTED ADJUSTED AND CERTIFIED AT A MINIMUM, ONCE EVERY THREE YEARS OF OPERATION. INSPECTIONS ADJUSTMENTS, AND CERTIFICATIONS MUST BE PERFORMED BY A QUALIFIED MECHANIC AND ACCORDING TO THE ENGINE MANUFACTURER'S PROCEDURES.  
[RULE 1110.2]
4. THIS ENGINE SHALL NOT OPERATE MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 20 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.  
[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]
5. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:
  - A. EMERGENCY USE HOURS OF OPERATION
  - B. MAINTENANCE AND TESTING HOURS
  - C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION)

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION THE LOG SHALL BE KEPT FOR A MINIMUM OF THREE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE





## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.

[RULE 1303(b)(2)-OFFSET, RULE 1470]

6. OPERATION BEYOND THE 20 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.  
[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]
7. THIS ENGINE SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.  
[RULE 1470]
8. THIS ENGINE SHALL NOT BE USED AS PART OF AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.  
[RULE 1470]

### **Periodic Monitoring:**

9. THE OPERATOR SHALL INSTALL AND MAINTAIN A NON-RESETTABLE ELAPSED TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THE ENGINE.  
[RULE 3004 (A)(4)]

### **Emissions And Requirements:**

10. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMIT TO OPERATE

Permit No. D58610  
A/N 267420

#### Equipment Description:

INTERNAL COMBUSTION ENGINE, CUMMINS, DIESEL-FUELED, EMERGENCY ELECTRICAL GENERATION (SOUTH MUDD), MODEL NO. 6BT5.9-G2, TURBOCHARGED, AFTERCOOLED, 6 CYLINDERS, 166 BHP.

#### Conditions:

1. OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

[RULE 204]

2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

[RULE 204]

3. THIS ENGINE SHALL NOT OPERATE MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 20 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

4. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

A. EMERGENCY USE HOURS OF OPERATION

B. MAINTENANCE AND TESTING HOURS

C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION)

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION THE LOG SHALL BE KEPT FOR A MINIMUM OF THREE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.

[RULE 1303(b)(2)-OFFSET, RULE 1470]

5. OPERATION BEYOND THE 20 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

6. THIS ENGINE SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.  
[RULE 1470]
7. THIS ENGINE SHALL NOT BE USED AS PART OF AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.  
[RULE 1470]

### **Periodic Monitoring:**

8. THE OPERATOR SHALL INSTALL AND MAINTAIN A NON-RESETTABLE ELAPSED TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THE ENGINE.  
[RULE 3004 (A)(4)]

### **Emissions and Requirements:**

9. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMIT TO OPERATE

Permit No. D64372  
A/N 271879

#### Equipment Description:

INTERNAL COMBUSTION ENGINE, JOHN DEERE, DIESEL-FUELED, EMERGENCY ELECTRICAL GENERATION (AVERY CENTER), MODEL NO. 6059T, TURBOCHARGED, AFTERCOOLED, 6 CYLINDERS, 134 BHP.

#### Conditions:

1. OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]
2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. THIS ENGINE SHALL NOT OPERATE MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 20 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.  
[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]
4. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:
  - A. EMERGENCY USE HOURS OF OPERATION
  - B. MAINTENANCE AND TESTING HOURS
  - C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION)

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION THE LOG SHALL BE KEPT FOR A MINIMUM OF THREE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.

[RULE 1303(b)(2)-OFFSET, RULE 1470]
5. OPERATION BEYOND THE 20 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION



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## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

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COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

6. THIS ENGINE SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.  
[RULE 1470]
7. THIS ENGINE SHALL NOT BE USED AS PART OF AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.  
[RULE 1470]
8. THE FUEL INJECTION TIMING OF THIS ENGINE SHALL BE SET AND MAINTAINED AT 4 DEGREES RETARDED RELATIVE TO STANDARD TIMING.  
[RULE 1303 (a)(1)]

### Periodic Monitoring:

9. THE OPERATOR SHALL INSTALL AND MAINTAIN A NON-RESETTABLE ELAPSED TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THE ENGINE.  
[RULE 3004 (A)(4)]

### Emissions and Requirements:

10. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMIT TO OPERATE

Permit No. D83124  
A/N 292810

#### Equipment Description:

INTERNAL COMBUSTION ENGINE, CATERPILLAR, 6 CYLINDERS, TURBOCHARGED, MODEL NO. 3056 T (100 KW), SERIAL NO. 2010072, DIESEL-FUELED, DRIVING AN EMERGENCY ELECTRICAL GENERATOR (SATELLITE PLANT), 160 BHP.

#### Conditions:

1. OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

[RULE 204]

2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

[RULE 204]

3. THIS ENGINE SHALL NOT OPERATE MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 20 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

4. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

A. EMERGENCY USE HOURS OF OPERATION

B. MAINTENANCE AND TESTING HOURS

C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION)

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION THE LOG SHALL BE KEPT FOR A MINIMUM OF THREE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.

[RULE 1303(b)(2)-OFFSET, RULE 1470]

5. OPERATION BEYOND THE 20 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION



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## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

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COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

6. THIS ENGINE SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.  
[RULE 1470]
7. THIS ENGINE SHALL NOT BE USED AS PART OF AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.  
[RULE 1470]

### Periodic Monitoring:

8. THE OPERATOR SHALL INSTALL AND MAINTAIN A NON-RESETTABLE ELAPSED TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THE ENGINE.  
[RULE 3004 (A)(4)]

### Emissions and Requirements:

9. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMIT TO OPERATE

Permit No. D91737  
A/N 304633

#### Equipment Description:

INTERNAL COMBUSTION ENGINE, CATERPILLAR, 8 CYLINDERS, TURBOCHARGED, AFTERCOOLED, MODEL NO. 3208 ATAAC, DIESEL-FUELED, DRIVING AN EMERGENCY ELECTRICAL GENERATOR (MOORE), 292 BHP.

#### Conditions:

1. OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

[RULE 204]

2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

[RULE 204]

3. THIS ENGINE SHALL NOT OPERATE MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 20 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

4. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

A. EMERGENCY USE HOURS OF OPERATION

B. MAINTENANCE AND TESTING HOURS

C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION)

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION THE LOG SHALL BE KEPT FOR A MINIMUM OF THREE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.

[RULE 1303(b)(2)-OFFSET, RULE 1470]

5. OPERATION BEYOND THE 20 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION





## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

6. THIS ENGINE SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.  
[RULE 1470]
7. THIS ENGINE SHALL NOT BE USED AS PART OF AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.  
[RULE 1470]

### **Periodic Monitoring:**

8. THE OPERATOR SHALL INSTALL AND MAINTAIN A NON-RESETTABLE ELAPSED TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THE ENGINE.  
[RULE 3004 (A)(4)]

### **Emissions and Requirements:**

9. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

### **PERMIT TO OPERATE**

**Permit No. F15249  
A/N 335460**

#### **Equipment Description:**

INTERNAL COMBUSTION ENGINE, CUMMINS, 6 CYLINDERS, TURBOCHARGED, AFTERCOOLED, MODEL NO. LTA10-G1, DIESEL-FUELED, DRIVING AN EMERGENCY ELECTRICAL GENERATOR (MILLIKAN LIBRARY), 380 BHP.

#### **Conditions:**

1. OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

[RULE 204]

2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

[RULE 204]

3. THIS ENGINE SHALL NOT OPERATE MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 20 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

4. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

A. EMERGENCY USE HOURS OF OPERATION

B. MAINTENANCE AND TESTING HOURS

C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION)

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION THE LOG SHALL BE KEPT FOR A MINIMUM OF THREE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.

[RULE 1303(b)(2)-OFFSET, RULE 1470]

5. OPERATION BEYOND THE 20 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION



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## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

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COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

6. THIS ENGINE SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.  
[RULE 1470]
7. THIS ENGINE SHALL NOT BE USED AS PART OF AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.  
[RULE 1470]

### Periodic Monitoring:

8. THE OPERATOR SHALL INSTALL AND MAINTAIN A NON-RESETTABLE ELAPSED TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THE ENGINE.  
[RULE 3004 (A)(4)]

### Emissions and Requirements:

9. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMIT TO OPERATE

Permit No. F18063  
A/N 346594

#### Equipment Description:

INTERNAL COMBUSTION ENGINE, GENERAC, 4 CYLINDERS, NATURALLY ASPIRATED, MODEL NO. 5.0NA, DIESEL-FUELED, DRIVING AN EMERGENCY ELECTRICAL GENERATOR (KARMEN ROOF), 75 BHP.

#### Conditions:

1. OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

[RULE 204]

2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

[RULE 204]

3. THIS ENGINE SHALL NOT OPERATE MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 20 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

4. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

A. EMERGENCY USE HOURS OF OPERATION

B. MAINTENANCE AND TESTING HOURS

C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION)

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION THE LOG SHALL BE KEPT FOR A MINIMUM OF THREE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.

[RULE 1303(b)(2)-OFFSET, RULE 1470]

5. OPERATION BEYOND THE 20 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS



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## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

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LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

6. THIS ENGINE SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.  
[RULE 1470]
7. THIS ENGINE SHALL NOT BE USED AS PART OF AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.  
[RULE 1470]

### **Periodic Monitoring:**

8. THE OPERATOR SHALL INSTALL AND MAINTAIN A NON-RESETTABLE ELAPSED TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THE ENGINE.  
[RULE 3004 (A)(4)]

### **Emissions and Requirements:**

9. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

### **PERMIT TO OPERATE**

**Permit No. F41928  
A/N 360776**

#### **Equipment Description:**

INTERNAL COMBUSTION ENGINE, GENERAC, MODEL NO. 4.0DTA, DIESEL-FUELED, EMERGENCY ELECTRICAL GENERATION (ALLES KERCKHOFF), 4 CYLINDERS, TURBOCHARGED AND AFTERCOOLED, 91 BHP.

#### **Conditions:**

1. OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

[RULE 204]

2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

[RULE 204]

3. THIS ENGINE SHALL NOT OPERATE MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 20 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

4. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

A. EMERGENCY USE HOURS OF OPERATION

B. MAINTENANCE AND TESTING HOURS

C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION)

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION THE LOG SHALL BE KEPT FOR A MINIMUM OF THREE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.

[RULE 1303(b)(2)-OFFSET, RULE 1470]

5. OPERATION BEYOND THE 20 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

6. THIS ENGINE SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.  
[RULE 1470]
7. THIS ENGINE SHALL NOT BE USED AS PART OF AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.  
[RULE 1470]

### **Periodic Monitoring:**

8. THE OPERATOR SHALL INSTALL AND MAINTAIN A NON-RESETTABLE ELAPSED TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THE ENGINE.  
[RULE 3004 (A)(4)]

### **Emissions and Requirements:**

9. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMIT TO OPERATE

Permit No. F41929  
A/N 385178

#### Equipment Description:

INTERNAL COMBUSTION ENGINE, PERKINS, MODEL NO. 1006-6T, DIESEL-FUELED, EMERGENCY ELECTRICAL GENERATION (USGS), 6 CYLINDERS, TURBOCHARGED, 166 BHP.

#### Conditions:

1. OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

[RULE 204]

2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

[RULE 204]

3. THIS ENGINE SHALL NOT OPERATE MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 20 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

4. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

A. EMERGENCY USE HOURS OF OPERATION

B. MAINTENANCE AND TESTING HOURS

C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION)

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION THE LOG SHALL BE KEPT FOR A MINIMUM OF THREE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.

[RULE 1303(b)(2)-OFFSET, RULE 1470]

5. OPERATION BEYOND THE 20 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN





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## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

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TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

6. THIS ENGINE SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.  
[RULE 1470]
7. THIS ENGINE SHALL NOT BE USED AS PART OF AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.  
[RULE 1470]

### Periodic Monitoring:

8. THE OPERATOR SHALL INSTALL AND MAINTAIN A NON-RESETTABLE ELAPSED TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THE ENGINE.  
[RULE 3004 (A)(4)]

### Emissions and Requirements:

9. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMIT TO OPERATE

Permit No. F39728  
A/N 385441

#### Equipment Description:

INTERNAL COMBUSTION ENGINE, PERKINS, MODEL NO. GA, DIESEL-FUELED, EMERGENCY ELECTRICAL GENERATION (ATS CENTER), 6 CYLINDERS, TURBOCHARGED AND AFTERCOOLED, 325 BHP.

#### Conditions:

1. OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

[RULE 204]

2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

[RULE 204]

3. THIS ENGINE SHALL NOT OPERATE MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 20 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

4. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

A. EMERGENCY USE HOURS OF OPERATION

B. MAINTENANCE AND TESTING HOURS

C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION)

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION THE LOG SHALL BE KEPT FOR A MINIMUM OF THREE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.

[RULE 1303(b)(2)-OFFSET, RULE 1470]

5. OPERATION BEYOND THE 20 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

6. THIS ENGINE SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.  
[RULE 1470]
7. THIS ENGINE SHALL NOT BE USED AS PART OF AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.  
[RULE 1470]

### **Periodic Monitoring:**

8. THE OPERATOR SHALL INSTALL AND MAINTAIN A NON-RESETTABLE ELAPSED TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THE ENGINE.  
[RULE 3004 (A)(4)]

### **Emissions and Requirements:**

9. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMIT TO OPERATE

Permit No. F45731  
A/N 390098

#### Equipment Description:

INTERNAL COMBUSTION ENGINE, CUMMINS, MODEL NO. QST30-G1, DIESEL-FUELED, EMERGENCY ELECTRICAL GENERATION (BROAD LABORATORY), 12 CYLINDERS, TURBOCHARGED AND AFTERCOOLED, 1135 BHP.

#### Conditions:

1. OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

[RULE 204]

2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

[RULE 204]

3. THIS ENGINE SHALL NOT OPERATE MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 20 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

4. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

A. EMERGENCY USE HOURS OF OPERATION

B. MAINTENANCE AND TESTING HOURS

C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION)

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION THE LOG SHALL BE KEPT FOR A MINIMUM OF THREE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.

[RULE 1303(b)(2)-OFFSET, RULE 1470]

5. OPERATION BEYOND THE 20 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS



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## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

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LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

6. THIS ENGINE SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.  
[RULE 1470]
7. THIS ENGINE SHALL NOT BE USED AS PART OF AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.  
[RULE 1470]

### **Periodic Monitoring:**

8. THE OPERATOR SHALL INSTALL AND MAINTAIN A NON-RESETTABLE ELAPSED TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THE ENGINE.  
[RULE 3004 (A)(4)]

### **Emissions and Requirements:**

9. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMIT TO OPERATE

Permit No. F53900  
A/N 404167

#### Equipment Description:

INTERNAL COMBUSTION ENGINE, JOHN DEERE, MODEL NO. 4045D (53 KVA), DIESEL-FUELED, EMERGENCY ELECTRICAL GENERATION (POWELL BOOTH), 4 CYLINDERS, NATURALLY ASPIRATED, 71 BHP.

#### Conditions:

1. OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]
2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. THIS ENGINE SHALL NOT OPERATE MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 20 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.  
[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]
4. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:
  - A. EMERGENCY USE HOURS OF OPERATION
  - B. MAINTENANCE AND TESTING HOURS
  - C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION)

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION THE LOG SHALL BE KEPT FOR A MINIMUM OF THREE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.  
[RULE 1303(b)(2)-OFFSET, RULE 1470]
5. OPERATION BEYOND THE 20 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

6. THIS ENGINE SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.  
[RULE 1470]
7. THIS ENGINE SHALL NOT BE USED AS PART OF AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.  
[RULE 1470]

### **Periodic Monitoring:**

8. THE OPERATOR SHALL INSTALL AND MAINTAIN A NON-RESETTABLE ELAPSED TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THE ENGINE.  
[RULE 3004 (A)(4)]

### **Emissions and Requirements:**

9. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMIT TO OPERATE

Permit No. F54055  
A/N 404168

#### Equipment Description:

INTERNAL COMBUSTION ENGINE, CATERPILLAR, MODEL NO. 3208 ATAAC, DIESEL-FUELED, EMERGENCY ELECTRICAL GENERATION (BECKMAN INSTITUTE), 8 CYLINDERS, FOUR CYCLE, TURBOCHARGED AND AFTERCOOLED, 300 BHP.

#### Conditions:

1. OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

[RULE 204]

2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

[RULE 204]

3. THIS ENGINE SHALL NOT OPERATE MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 20 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

4. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

A. EMERGENCY USE HOURS OF OPERATION

B. MAINTENANCE AND TESTING HOURS

C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION)

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION THE LOG SHALL BE KEPT FOR A MINIMUM OF THREE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.

[RULE 1303(b)(2)-OFFSET, RULE 1470]

5. OPERATION BEYOND THE 20 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION





## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

6. THIS ENGINE SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.  
[RULE 1470]
7. THIS ENGINE SHALL NOT BE USED AS PART OF AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.  
[RULE 1470]
8. THE FUEL INJECTION TIMING OF THIS ENGINE SHALL BE SET AND MAINTAINED AT 4 DEGREES RETARDED RELATIVE TO STANDARD TIMING.  
[RULE 1303 (a)(1)]
9. THE IGNITION TIMING OF THIS ENGINE MUST BE INSPECTED ADJUSTED AND CERTIFIED AT A MINIMUM, ONCE EVERY THREE YEARS OF OPERATION. INSPECTIONS ADJUSTMENTS, AND CERTIFICATIONS MUST BE PERFORMED BY A QUALIFIED MECHANIC AND ACCORDING TO THE ENGINE MANUFACTURER'S PROCEDURES.  
[RULE 1110.2]

### **Periodic Monitoring:**

10. THE OPERATOR SHALL INSTALL AND MAINTAIN A NON-RESETTABLE ELAPSED TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THE ENGINE.  
[RULE 3004 (A)(4)]

### **Emissions and Requirements:**

11. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMIT TO OPERATE

Permit No. F76394  
A/N 408837

#### Equipment Description:

INTERNAL COMBUSTION ENGINE, CATERPILLAR, MODEL NO. 3412DISTA, DIESEL-FUELED, EMERGENCY ELECTRICAL GENERATION (KERCKHOFF BLDG. #27), 12 CYLINDERS, TURBOCHARGED AND AFTERCOOLED, 1114 BHP.

#### Conditions:

1. OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

[RULE 204]

2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

[RULE 204]

3. THIS ENGINE SHALL NOT OPERATE MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 20 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

4. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

A. EMERGENCY USE HOURS OF OPERATION

B. MAINTENANCE AND TESTING HOURS

C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION)

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION THE LOG SHALL BE KEPT FOR A MINIMUM OF THREE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.

[RULE 1303(b)(2)-OFFSET, RULE 1470]

5. OPERATION BEYOND THE 20 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION



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## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

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COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

6. THIS ENGINE SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.  
[RULE 1470]
7. THIS ENGINE SHALL NOT BE USED AS PART OF AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.  
[RULE 1470]

### **Periodic Monitoring:**

8. THE OPERATOR SHALL INSTALL AND MAINTAIN A NON-RESETTABLE ELAPSED TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THE ENGINE.  
[RULE 3004 (A)(4)]

### **Emissions and Requirements:**

9. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMIT TO OPERATE

Permit No. F76393  
A/N 430597

#### Equipment Description:

INTERNAL COMBUSTION ENGINE, PERKINS, MODEL NO. 1004-40T, DIESEL-FUELED, EMERGENCY ELECTRICAL GENERATION (PARKING GARAGE), 4 CYLINDERS, TURBOCHARGED, 95 BHP.

#### Conditions:

1. OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

[RULE 204]

2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

[RULE 204]

3. THIS ENGINE SHALL NOT OPERATE MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 30 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

4. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

A. EMERGENCY USE HOURS OF OPERATION

B. MAINTENANCE AND TESTING HOURS

C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION)

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION THE LOG SHALL BE KEPT FOR A MINIMUM OF THREE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.

[RULE 1303(b)(2)-OFFSET, RULE 1470]

5. OPERATION BEYOND THE 30 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN



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## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

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TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

6. THIS ENGINE SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.  
[RULE 1470]
7. THIS ENGINE SHALL NOT BE USED AS PART OF AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.  
[RULE 1470]

### Periodic Monitoring:

8. THE OPERATOR SHALL INSTALL AND MAINTAIN A NON-RESETTABLE ELAPSED TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THE ENGINE.  
[RULE 3004 (A)(4)]

### Emissions and Requirements:

9. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMIT TO OPERATE

Permit No. F84102  
A/N 449574

#### Equipment Description:

INTERNAL COMBUSTION ENGINE, JOHN DEERE, MODEL NO. 6068HF475E, DIESEL-FUELED, EMERGENCY ELECTRICAL GENERATION (SOUTH HOUSES), 6 CYLINDERS, TURBOCHARGED AND AFTERCOOLED, 314 BHP.

#### Conditions:

1. OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

[RULE 204]

2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

[RULE 204]

3. THIS ENGINE SHALL NOT OPERATE MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 50 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

4. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

A. EMERGENCY USE HOURS OF OPERATION

B. MAINTENANCE AND TESTING HOURS

C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION)

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION THE LOG SHALL BE KEPT FOR A MINIMUM OF THREE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.

[RULE 1303(b)(2)-OFFSET, RULE 1470]

5. OPERATION BEYOND THE 50 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS



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## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

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LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.

[RULE 1304(a)-MODELING AND OFFSET, RULE 1470]

6. THIS ENGINE SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.  
[RULE 1470]
7. THIS ENGINE SHALL NOT BE USED AS PART OF AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.  
[RULE 1470]

### Periodic Monitoring:

8. THE OPERATOR SHALL INSTALL AND MAINTAIN A NON-RESETTABLE ELAPSED TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THE ENGINE.  
[RULE 3004 (A)(4)]

### Emissions and Requirements:

9. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

***NOTE: SEE PERMIT TO CONSTRUCT/OPERATE  
FOR A/N 492430.***

### **PERMIT TO OPERATE**

**Permit No. N16673  
A/N 441638**

#### **Equipment Description:**

Fuel Storage and Dispensing Facility Consisting of:

1. 2 -GASOLINE NOZZLES DISPENSING 2 PRODUCTS, EQUIPPED WITH PHASE II VAPOR RECOVERY SYSTEM, BALANCE RETRACTOR (G-70-52-AM).
2. 1 -DUAL COMPARTMENT UNDERGROUND GASOLINE STORAGE TANK, 12,000-GALLON CAPACITY, METHANOL COMPATIBLE, CONSISTING OF:
  - A. ONE 6,000-GALLON GASOLINE COMPARTMENT TANK, EQUIPPED WITH PHASE I VAPOR RECOVERY SYSTEM, CNI MANUFACTURING (VR-104-A).
  - B. ONE 6,000-GALLON GASOLINE COMPARTMENT TANK, EQUIPPED WITH PHASE I VAPOR RECOVERY SYSTEM, CNI MANUFACTURING (VR-104-A).

#### **Conditions:**

1. OPERATION OF THIS EQUIPMENT SHALL BE IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT WAS ISSUED, UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. EXCEPT FOR DIESEL TRANSFERS, PHASE I VAPOR RECOVERY SYSTEMS SHALL BE IN FULL OPERATION WHENEVER FUEL IS BEING TRANSFERRED INTO STORAGE TANKS.  
[RULE 461]
4. EXCEPT FOR DIESEL TRANSFERS, PHASE II VAPOR RECOVERY SYSTEMS SHALL BE IN FULL OPERATION WHENEVER FUEL IS BEING TRANSFERRED INTO MOTOR VEHICLES, AS DEFINED IN RULE 461.  
[RULE 461]
5. ALL PHASE I AND PHASE II VAPOR RECOVERY EQUIPMENT AT THIS FACILITY SHALL BE INSTALLED, OPERATED AND MAINTAINED TO MEET ALL CALIFORNIA AIR RESOURCES BOARD CERTIFICATION REQUIREMENTS.





## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

[RULE 461, RULE 1303 (a)(1)]

6. THE PHASE II VAPOR RECOVERY SYSTEM SHALL BE INSTALLED, OPERATED, AND MAINTAINED SUCH THAT THE MAXIMUM ALLOWABLE PRESSURE THROUGH THE SYSTEM INCLUDING NOZZLE, VAPOR HOSE, SWIVELS, AND UNDERGROUND PIPING DOES NOT EXCEED THE DYNAMIC BACK PRESSURES DESCRIBED BY THE CALIFORNIA AIR RESOURCES BOARD EXECUTIVE ORDER BY WHICH THE SYSTEM WAS CERTIFIED:

NITROGEN FLOWRATES (CFH)	DYNAMIC BACK PRESSURE (INCHES OF WATER)
60	0.35
80	0.62

DYNAMIC BACK PRESSURE TESTS SHALL BE CONDUCTED TO DETERMINE THE PHASE II SYSTEM VAPOR RECOVERY BACK PRESSURES. THE TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH CARB TEST PROCEDURE METHOD TP-201.4. RESULTS SHALL BE SUBMITTED TO THE DISTRICT, OFFICE OF ENGINEERING AND COMPLIANCE, WITHIN SEVENTY-TWO (72) HOURS OF TESTS.

THE AQMD SHALL BE NOTIFIED BY E-MAIL AT R461TESTING@AQMD.GOV OR BY FACSIMILE AT TELEPHONE NUMBER (909) 396-3606 AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO TESTING. SUCH NOTIFICATION SHALL INCLUDE THE NAME OF THE OWNER OR OPERATOR; THE NAME OF THE CONTRACTORS; THE LOCATION OF THE FACILITY; AND THE SCHEDULED START AND COMPLETION DATES OF THE DYNAMIC BACK PRESSURE TEST.

[RULE 461]

7. A STATIC PRESSURE LEAK DECAY TEST SHALL BE CONDUCTED TO DEMONSTRATE THAT THE STORAGE TANKS, THE REMOTE AND/OR NOZZLE VAPOR RECOVERY CHECK VALVES, ASSOCIATED VAPOR RETURN PIPING AND FITTINGS ARE FREE FROM VAPOR LEAKS. THE TEST SHALL BE CONDUCTED IN ACCORDANCE WITH CARB TEST PROCEDURE METHOD TP-201.3. RESULTS SHALL BE SUBMITTED TO THE AQMD, OFFICE OF ENGINEERING AND COMPLIANCE, WITHIN SEVENTY-TWO (72) HOURS OF TEST.

THE AQMD SHALL BE NOTIFIED BY E-MAIL AT R461TESTING@AQMD.GOV OR BY FACSIMILE AT TELEPHONE NUMBER (909) 396-3606 AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO TESTING. SUCH NOTIFICATION SHALL INCLUDE THE NAME OF THE OWNER OR OPERATOR; THE NAME OF THE CONTRACTORS; THE LOCATION OF THE FACILITY; AND THE SCHEDULED START AND COMPLETION DATES OF THE STATIC PRESSURE LEAK DECAY TEST.

[RULE 461]

8. IF THE CARB EXECUTIVE ORDER REQUIRES THE INSTALLATION OF A LIQUID REMOVAL DEVICE, A LIQUID REMOVAL RATE TEST SHALL BE CONDUCTED TO DEMONSTRATE THE REMOVAL OF GASOLINE FROM THE VAPOR PASSAGE OF THE COAXIAL HOSE. THE TEST SHALL BE CONDUCTED IN ACCORDANCE WITH CARB TEST PROCEDURE METHOD TP-201.6. RESULTS SHALL BE SUBMITTED TO THE AQMD, OFFICE OF ENGINEERING AND COMPLIANCE, WITHIN SEVENTY-TWO (72) HOURS OF TEST.



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

THE SCAQMD SHALL BE NOTIFIED BY E-MAIL AT [R461TESTING@AQMD.GOV](mailto:R461TESTING@AQMD.GOV) OR BY FACSIMILE AT TELEPHONE NUMBER (909) 396-3606 AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO TESTING. SUCH NOTIFICATION SHALL INCLUDE THE NAME OF THE OWNER OR OPERATOR; THE NAME OF THE CONTRACTORS; THE LOCATION OF THE FACILITY; AND THE SCHEDULED START AND COMPLETION DATES OF THE LIQUID REMOVAL RATE TEST.  
[RULE 461]

9. THE TESTING FOR THE ABOVE MENTIONED TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH THE MOST RECENT RULE 461 AMENDMENT OR CARB EXECUTIVE ORDER REQUIREMENTS, WHICHEVER IS MORE STRINGENT.  
[RULE 461]
10. ALL RECORDS AND TEST RESULTS THAT ARE REQUIRED TO BE MAINTAINED BY RULE 461 SHALL BE KEPT ON SITE FOR FOUR YEARS AND MADE AVAILABLE TO DISTRICT REPRESENTATIVES UPON REQUEST.  
[RULE 461]
11. AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO BACK-FILLING ANY UNDERGROUND STORAGE TANK OR PIPING, THE SCAQMD SHALL BE NOTIFIED BY E-MAIL AT [R461BACKFILL@AQMD.GOV](mailto:R461BACKFILL@AQMD.GOV) OR BY FACSIMILE AT TELEPHONE NUMBER (909) 396-3606. SUCH NOTIFICATION SHALL INCLUDE THE NAME OF THE OWNER OR OPERATOR; THE NAME OF THE CONTRACTORS; THE LOCATION OF THE FACILITY; AND THE SCHEDULED START AND COMPLETION DATES OF THE BACK-FILLING PROCEDURE. THE BACK-FILLING PROCEDURE SHALL NOT COMMENCE UNTIL INSPECTED BY A DISTRICT REPRESENTATIVE.  
[RULE 461]
12. A PRESSURE INTEGRITY TEST OF THE DROP TUBE/DRAIN VALVE ASSEMBLY SHALL BE CONDUCTED TO QUANTIFY THE PRESSURE INTEGRITY OF BOTH THE DROP TUBE AND DRAIN VALVE SEAL. THE TEST SHALL BE CONDUCTED AS A REVERIFICATION TEST AND THE TEST SHALL BE CONDUCTED IN ACCORDANCE WITH TEST PROCEDURE METHOD TP-201.IC. RESULTS SHALL BE SUBMITTED TO THE AQMD, OFFICE OF ENGINEERING AND COMPLIANCE, WITHIN SEVENTY-TWO (72) HOURS OF TEST.

THE AQMD SHALL BE NOTIFIED BY E-MAIL AT [R461TESTING@AQMD.GOV](mailto:R461TESTING@AQMD.GOV) OR BY FACSIMILE AT TELEPHONE NUMBER (909) 396-3606 AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO TESTING. SUCH NOTIFICATION SHALL INCLUDE THE NAME OF THE OWNER AND OPERATOR; THE NAME OF THE CONTRACTOR; THE LOCATION OF THE FACILITY; AND THE SCHEDULED START AND COMPLETION DATES OF THE PRESSURE INTEGRITY TEST OF DROP TUBE/DRAIN VALVE ASSEMBLY.  
[RULE 461]



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

13. A LEAK RATE AND CRACKING PRESSURE TEST OF PRESSURE/VACUUM RELIEF VENT VALVES SHALL BE CONDUCTED WITHIN THIRTY DAYS (30) AFTER THE START OF OPERATION OF THE CNI MANUFACTURING PHASE I EVR EQUIPMENT AND AT LEAST ONCE EVERY THREE (3) YEARS THEREAFTER TO DETERMINE THE PRESSURE AND VACUUM AT WHICH THE PRESSURE/VACUUM VENT VALVE ACTUATES, AND TO DETERMINE THE VOLUMETRIC LEAK RATE AT A GIVEN PRESSURE. THE TEST SHALL BE CONDUCTED IN ACCORDANCE WITH THE TEST PROCEDURE METHOD TP-201.1E. RESULTS SHALL BE SUBMITTED TO THE AQMD, OFFICE OF ENGINEERING AND COMPLIANCE, WITHIN SEVENTY-TWO (72) HOURS OF TEST. THIS TEST RESULT SHALL BE KEPT ON SITE FOR THREE (3) YEARS AND MADE AVAILABLE TO DISTRICT REPRESENTATIVES UPON REQUEST.

THE AQMD SHALL BE NOTIFIED BY E-MAIL AT [R461TESTING@AQMD.GOV](mailto:R461TESTING@AQMD.GOV) OR BY FACSIMILE AT TELEPHONE NUMBER (909) 396-3606 AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO TESTING. SUCH NOTIFICATION SHALL INCLUDE THE NAME OF THE OWNER OR OPERATOR; THE NAME OF THE CONTRACTOR; THE LOCATION OF THE FACILITY; AND THE SCHEDULED START AND COMPLETION DATES OF THE LEAK RATE AND CRACKING PRESSURE TEST OF PRESSURE/VACUUM RELIEF VENT VALVES.

[RULE 461]

14. A STATIC TORQUE TEST OF ROTATABLE PHASE I ADAPTORS SHALL BE CONDUCTED AS A REVERIFICATION TEST TO QUANTIFY THE AMOUNT OF STATIC TORQUE REQUIRED TO START THE ROTATION OF THE ROTATABLE PHASE I ADAPTORS. THE TEST SHALL BE CONDUCTED IN ACCORDANCE WITH THE TEST PROCEDURE METHOD OUTLINED IN TP-201.1B. RESULTS SHALL BE SUBMITTED TO THE AQMD, OFFICE OF ENGINEERING AND COMPLIANCE, WITHIN SEVENTY-TWO (72) HOURS OF TEST.

THE AQMD SHALL BE NOTIFIED BY E-MAIL AT [R461TESTING@AQMD.GOV](mailto:R461TESTING@AQMD.GOV) OR BY FACSIMILE AT TELEPHONE NUMBER (909) 396-3606 AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO TESTING. SUCH NOTIFICATION SHALL INCLUDE THE NAME OF THE OWNER OR OPERATOR; THE NAME OF THE CONTRACTOR; THE LOCATION OF THE FACILITY; AND THE SCHEDULED START AND COMPLETION DATES OF THE STATIC TORQUE TEST OF ROTATABLE PHASE I ADAPTORS.

[RULE 461]

### Periodic Monitoring:

15. THE OPERATOR SHALL HAVE A PERSON THAT HAS BEEN TRAINED IN ACCORDANCE WITH RULE 461(d)(5) CONDUCT A SEMI-ANNUAL INSPECTION OF THE GASOLINE TRANSFER AND DISPENSING EQUIPMENT. THE FIRST INSPECTION SHALL BE IN ACCORDANCE WITH RULE 461, ATTACHMENT C, THE SECOND INSPECTION SHALL BE IN ACCORDANCE WITH RULE 461, ATTACHMENT D, AND THE SUBSEQUENT INSPECTIONS SHALL ALTERNATE PROTOCOLS. THE OPERATOR SHALL KEEP RECORDS OF THE INSPECTION AND THE REPAIRS IN ACCORDANCE TO RULE 461 AND SECTION K OF THIS PERMIT.

[RULE 3004 (a)(4)]



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## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

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### **Emissions And Requirements:**

16. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS :

VOC: RULE 461



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

### **PERMIT TO OPERATE**

*Note: This boiler will be replaced by new boiler, A/N 509333.*

**Permit No. F53892  
A/N 404164**

#### **Equipment Description:**

BOILER, NO. 2, BABCOCK AND WILCOX, WATERTUBE TYPE, MODEL NO. FM10-70B (CONTRACT #FMD-1362), WITH A 63,000,000 BTU PER HOUR NATURAL GAS AND FUEL OIL FIRED LO-NOX BURNER, FABER, MODEL NO. WB-1-26, WITH A 40 HP COMBUSTION AIR BLOWER, 15 HP RECIRCULATION FAN, AND A FORCED FLUE GAS RECIRCULATION SYSTEM.

#### **Conditions:**

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. THIS BOILER SHALL EMIT NO MORE THAN 30 PPM FOR OXIDES OF NITROGEN (NOX), CALCULATED AS NO<sub>2</sub> AND 400 PPM OF CARBON MONOXIDE (CO), ALL MEASURED BY VOLUME, ON A DRY BASIS, AT 3% O<sub>2</sub>.  
[RULE 1303 (b)(2), RULE 1146]
4. THE FLUE GAS RECIRCULATION SYSTEM SHALL BE IN FULL USE WHENEVER THE BOILER IS IN OPERATION.  
[RULE 1146, RULE 1303 (b)(2)]
5. THE OPERATOR SHALL COMPLY WITH RULE 218 BY OPERATING AN OXIDES OF NITROGEN CONTINUOUS EMISSIONS MONITORING SYSTEM.  
[RULE 218, RULE 1146]

#### **Periodic Monitoring:**

6. THE OPERATOR SHALL CONDUCT AN INSPECTION FOR VISIBLE EMISSION FROM ALL STACKS AND OTHER EMISSION POINTS OF THIS EQUIPMENT WHENEVER THIS EQUIPMENT HAS COMBUSTED ONE MILLION GALLONS OF DIESEL FUEL, TO BE COUNTED CUMULATIVELY OVER A FIVE YEAR PERIOD. THE INSPECTION SHALL BE CONDUCTED WHILE THE EQUIPMENT IS IN OPERATION AND DURING DAYLIGHT HOURS. IF ANY VISIBLE EMISSIONS (NOT INCLUDING CONDENSED WATER VAPOR) ARE DETECTED THAT LAST MORE THAN THREE MINUTES IN ANY ONE HOUR, THE OPERATOR SHALL EITHER:
  - A. TAKE CORRECTIVE ACTION(S) THAT ELIMINATES THE VISIBLE EMISSIONS WITHIN 24 HOURS AND REPORT THE VISIBLE EMISSIONS AS A POTENTIAL DEVIATION IN THE SAME



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## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

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FASHION AS DEVIATIONS ARE REQUIRED TO BE REPORTED IN SECTION K OF THIS PERMIT;  
OR

- B. HAVE A CARB-CERTIFIED SMOKE READER DETERMINE COMPLIANCE WITH THE OPACITY STANDARD, USING EPA METHOD 9 OR THE PROCEDURES IN THE CARB MANUAL "VISIBLE EMISSION EVALUATION", WITHIN THREE BUSINESS DAYS AND REPORT ANY DEVIATIONS TO AQMD.

IN ADDITION, THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

- A. STACK OR EMISSION POINT IDENTIFICATION;
- B. DESCRIPTION OF ANY CORRECTIVE ACTIONS TAKEN TO ABATE VISIBLE EMISSIONS;
- C. DATE AND TIME VISIBLE EMISSION WAS ABATED; AND
- D. VISIBLE EMISSION OBSERVATION RECORDED BY A CERTIFIED SMOKE READER.

[RULE 3004 (a)(4)]

### Emissions And Requirements:

7. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NOX: 30 PPMV, RULE 1146  
CO: 2000 PPMV, RULE 407  
CO: 400 PPMV, RULE 1146  
SOX: 500 PPMV, RULE 407  
PM: 0.1 GR/SCF, RULE 409



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMIT TO OPERATE

*Note: This boiler will be replaced by new boiler, A/N 509334.*

Permit No. F53899  
A/N 404165

#### Equipment Description:

BOILER BABCOCK AND WILCOX, WATERTUBE TYPE, MODEL NO. FM10-70B (CONTRACT #FMD-2354), WITH A 74,900,000 BTU PER HOUR NATURAL GAS AND FUEL OIL FIRED LO-NOX BURNER, FABER, MODEL NO. WB-1-28-FGR, WITH A 40 HP COMBUSTION AIR BLOWER, 20 HP RECIRCULATION FAN, AND A FORCED FLUE GAS RECIRCULATION SYSTEM.

#### Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. THIS BOILER SHALL EMIT NO MORE THAN 30 PPM FOR OXIDES OF NITROGEN (NOX), CALCULATED AS NO<sub>2</sub> AND 400 PPM OF CARBON MONOXIDE (CO), ALL MEASURED BY VOLUME, ON A DRY BASIS, AT 3% O<sub>2</sub>.  
[RULE 1303 (b)(2), RULE 1146]
4. THE FLUE GAS RECIRCULATION SYSTEM SHALL BE IN FULL USE WHENEVER THE BOILER IS IN OPERATION.  
[RULE 1146, RULE 1303 (b)(2)]
5. THE OPERATOR SHALL COMPLY WITH RULE 218 BY OPERATING AN OXIDES OF NITROGEN CONTINUOUS EMISSIONS MONITORING SYSTEM.  
[RULE 218, RULE 1146]

#### Periodic Monitoring:

6. THE OPERATOR SHALL CONDUCT AN INSPECTION FOR VISIBLE EMISSION FROM ALL STACKS AND OTHER EMISSION POINTS OF THIS EQUIPMENT WHENEVER THIS EQUIPMENT HAS COMBUSTED ONE MILLION GALLONS OF DIESEL FUEL, TO BE COUNTED CUMULATIVELY OVER A FIVE YEAR PERIOD. THE INSPECTION SHALL BE CONDUCTED WHILE THE EQUIPMENT IS IN OPERATION AND DURING DAYLIGHT HOURS. IF ANY VISIBLE EMISSIONS (NOT INCLUDING CONDENSED WATER VAPOR) ARE DETECTED THAT LAST MORE THAN THREE MINUTES IN ANY ONE HOUR, THE OPERATOR SHALL EITHER:
  - A. TAKE CORRECTIVE ACTION(S) THAT ELIMINATES THE VISIBLE EMISSIONS WITHIN 24 HOURS AND REPORT THE VISIBLE EMISSIONS AS A POTENTIAL DEVIATION IN THE SAME FASHION AS DEVIATIONS ARE REQUIRED TO BE REPORTED IN SECTION K OF THIS PERMIT;



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## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

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OR

- B. HAVE A CARB-CERTIFIED SMOKE READER DETERMINE COMPLIANCE WITH THE OPACITY STANDARD, USING EPA METHOD 9 OR THE PROCEDURES IN THE CARB MANUAL "VISIBLE EMISSION EVALUATION", WITHIN THREE BUSINESS DAYS AND REPORT ANY DEVIATIONS TO AQMD.

IN ADDITION, THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE FOLLOWING RECORDS:

- A. STACK OR EMISSION POINT IDENTIFICATION;
  - B. DESCRIPTION OF ANY CORRECTIVE ACTIONS TAKEN TO ABATE VISIBLE EMISSIONS;
  - C. DATE AND TIME VISIBLE EMISSION WAS ABATED; AND
  - D. VISIBLE EMISSION OBSERVATION RECORDED BY A CERTIFIED SMOKE READER.
- [RULE 3004 (a)(4)]

### **Emissions And Requirements:**

7. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NOX: 30 PPMV, RULE 1146  
CO: 2000 PPMV, RULE 407  
CO: 400 PPMV, RULE 1146  
SOX: 500 PPMV, RULE 407  
PM: 0.1 GR/SCF, RULE 409





## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMIT TO OPERATE

Permit No. F92373  
A/N 402552

#### Equipment Description:

COMBINED CYCLE COGENERATION SYSTEM (CENTRAL PLANT) CONSISTING OF:

1. GAS TURBINE, SOLAR MARS, MODEL NO. MARS 100S T 15,000, SERIAL NO. MG 02746, 126.1 MMBTU PER HOUR, NATURAL GAS, DRIVING A 10-MW ELECTRICAL GENERATOR, AND
2. EXHAUST HEAT RECOVERY STEAM GENERATOR (HRSG), ENERGY RECOVERY INTERNATIONAL (ERI), MODEL NO. VC-3-4214-SH, WITH NO SUPPLEMENTAL FIRING.

#### Conditions:

- 1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]

- 2) THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]

- 3) EMISSIONS FROM THIS EQUIPMENT SHALL NOT EXCEED THE FOLLOWING:

NOx : 2.5 PPMV @ 15% O<sub>2</sub>  
CO : 6 PPMV @ 15% O<sub>2</sub>  
ROG : 4.5 PPMV @ 15% O<sub>2</sub>

[RULE 1303(a)(1)--BACT, RULE 1303(b)(2)--OFFSET]

- 4) THE OPERATOR SHALL CONDUCT SOURCE TEST(S) FOR THE POLLUTANT(S) IDENTIFIED BELOW.

POLLUTANT(S) TO BE TESTED	REQUIRED TEST METHOD(S)	AVG. TIME	TEST LOCATION
SOX EMISSIONS	APPROVED DISTRICT METHOD	DISTRICT APPROVED AVG. TIME	FUEL SAMPLE
ROG EMISSIONS	APPROVED DISTRICT METHOD	1 HOUR	SCR OUTLET
PM EMISSIONS	APPROVED DISTRICT METHOD	DISTRICT APPROVED AVG. TIME	SCR OUTLET

AFTER THE INITIAL SOURCE TEST, THE TEST(S) SHALL BE CONDUCTED AT LEAST ONCE EVERY THREE YEARS.



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

THE TEST(S) SHALL BE CONDUCTED IN ACCORDANCE WITH A DISTRICT APPROVED SOURCE TEST PROTOCOL.

THE TEST(S) SHALL DETERMINE THE OXYGEN LEVELS IN THE EXHAUST. IN ADDITION, THE TEST SHALL RECORD THE FUEL FLOW RATE (CFH), THE FLUE GAS FLOW RATE, AND THE TURBINE GENERATING OUTPUT IN MW.

THE TEST SHALL BE CONDUCTED WHEN THE GAS TURBINE IS OPERATING AT 100 PERCENT OF MAXIMUM HEAT INPUT. THE TEST SHALL BE CONDUCTED TO DEMONSTRATE COMPLIANCE WITH THE LIMIT SPECIFIED BY CONDITION NO. 3 FOR ROG AND THE LIMITS SET FORTH UNDER EMISSIONS AND REQUIREMENTS, BELOW, FOR SOX AND PM.

THE SOURCE TEST RESULTS SHALL BE KEPT ON THE PREMISES FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.

[40 CFR 60 SUBPART GG, RULE 1303(b)(2)—OFFSET, RULE 3004(a)(4)—Periodic Monitoring]

- 5) THE OPERATOR SHALL PROVIDE TO THE DISTRICT A SOURCE TEST REPORT IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

EMISSION DATA SHALL BE EXPRESSED IN TERMS OF CONCENTRATION (PPMV), CORRECTED TO 15 PERCENT OXYGEN (DRY BASIS), MASS RATE (LBS/HR), AND LBS/MM CUBIC FEET. IN ADDITION, SOLID PM EMISSIONS, IF REQUIRED TO BE TESTED, SHALL ALSO BE REPORTED IN TERMS OF GRAINS PER DSCF.

ALL EXHAUST FLOW RATE SHALL BE EXPRESSED IN TERMS OF DRY STANDARD CUBIC FEET PER MINUTE (DSCFM) AND DRY ACTUAL CUBIC FEET PER MINUTE (DACFM).

ALL MOISTURE CONCENTRATION SHALL BE EXPRESSED IN TERMS OF PERCENT CORRECTED TO 15 PERCENT OXYGEN.

SOURCE TEST RESULTS SHALL ALSO INCLUDE THE OXYGEN LEVELS IN THE EXHAUST, THE FUEL FLOW RATE (CFH), THE FLUE GAS TEMPERATURE, AND THE GENERATOR POWER OUTPUT (MW) UNDER WHICH THE TEST WAS CONDUCTED.

THE SOURCE TEST RESULTS SHALL BE KEPT ON THE PREMISES FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.

[40 CFR 60 SUBPART GG, RULE 1303(b)(2)—OFFSET, RULE 3004(a)(4)—Periodic Monitoring]

- 6) THE OPERATOR SHALL INSTALL AND MAINTAIN A CEMS TO CONTINUOUSLY MEASURE THE FOLLOWING PARAMETERS:

CO AND NO<sub>x</sub> CONCENTRATION IN PPMV.

CONCENTRATIONS SHALL BE CORRECTED TO 15 PERCENT OXYGEN ON A DRY BASIS.

THE CEMS WILL CONVERT THE ACTUAL CO AND NO<sub>x</sub> CONCENTRATIONS TO MASS EMISSION RATES (LBS/HR) AND RECORD THE HOURLY EMISSION RATES ON A CONTINUOUS BASIS.



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

THE CEMS SHALL BE INSTALLED AND OPERATED, IN ACCORDANCE WITH AN APPROVED AQMD RULE 218 CEMS PLAN APPLICATION.

THE CEMS SHALL BE INSTALLED AND OPERATED TO MEASURE CO AND NO<sub>x</sub> CONCENTRATION OVER A 15 MINUTE AVERAGING TIME PERIOD.

THE MONITORING RECORDS SHALL BE MAINTAINED FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.

[RULE 218, RULE 1303(a)(1)—BACT, RULE 1303(b)(2)—OFFSET]

- 7) THE 2.5 PPM NO<sub>x</sub> EMISSION LIMIT SHALL NOT APPLY DURING TURBINE STARTUP AND SHUTDOWN PERIODS. STARTUP TIME SHALL NOT EXCEED 60 MINUTES PER STARTUP AND THE NUMBER OF STARTUPS SHALL NOT EXCEED 25 PER CALENDAR YEAR. SHUTDOWN TIME SHALL NOT EXCEED 30 MINUTES PER SHUTDOWN AND THE NUMBER OF SHUTDOWNS SHALL NOT EXCEED 25 PER CALENDAR YEAR. WRITTEN RECORDS OF START-UPS AND SHUTDOWNS SHALL BE MAINTAINED FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.

[RULE 1303(a)(1)—BACT]

- 8) THE 6 PPM CO EMISSION LIMIT SHALL NOT APPLY DURING TURBINE STARTUP AND SHUTDOWN PERIODS. STARTUP TIME SHALL NOT EXCEED 60 MINUTES PER STARTUP AND THE NUMBER OF STARTUPS SHALL NOT EXCEED 25 PER CALENDAR YEAR. SHUTDOWN TIME SHALL NOT EXCEED 30 MINUTES PER SHUTDOWN AND THE NUMBER OF SHUTDOWNS SHALL NOT EXCEED 25 PER CALENDAR YEAR. WRITTEN RECORDS OF START-UPS AND SHUTDOWNS SHALL BE MAINTAINED FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.

[RULE 1303(a)(1)—BACT]

- 9) THE 2.5 PPMV NO<sub>x</sub> EMISSION LIMIT IS AVERAGED OVER 60 MINUTES AT 15 PERCENT OXYGEN, DRY.

[RULE 1303(a)(1)—BACT]

- 10) THE 6 PPMV CO EMISSION LIMIT IS AVERAGED OVER 60 MINUTES AT 15 PERCENT OXYGEN, DRY.

[RULE 1303(a)(1)—BACT]

- 11) FOR THE PURPOSES OF DETERMINING COMPLIANCE WITH DISTRICT RULE 475, COMBUSTION CONTAMINANT EMISSIONS MAY EXCEED THE CONCENTRATION LIMIT OR THE MASS EMISSION LIMIT LISTED, BUT NOT BOTH LIMITS AT THE SAME TIME.

[RULE 475]

- 12) THE OPERATOR SHALL VENT THIS EQUIPMENT TO THE SCR CONTROL WHENEVER THE TURBINE IS IN OPERATION.

[RULE 1303(a)(1)—BACT]



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**FACILITY PERMIT TO OPERATE  
CAL INST OF TECHNOLOGY**

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- 13) THE OPERATOR SHALL LIMIT THE NATURAL GAS USAGE TO NO LESS THAN 4575 LBS/HR DURING NORMAL OPERATION. NORMAL OPERATION SHALL NOT INCLUDE START-UP, SHUTDOWN AND MAINTENANCE PERIODS.  
[RULE 1303(a)(1)--BACT]
- 14) THE OPERATOR SHALL MAINTAIN CONTINUOUS RECORDS OF THE NATURAL GAS USAGE TO DEMONSTRATE COMPLIANCE WITH CONDITION NO. 13. SUCH RECORDS SHALL BE KEPT ON THE PREMISES FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.  
[RULE 1303(a)(1)--BACT]

**Emissions and Requirements:**

NOx: 92 PPMV, 40CFR60 SUBPART GG  
NOx: 2.5 PPMV, RULE 1303-BACT  
CO: 6 PPMV, RULE 1303-BACT  
CO: 2000 PPMV, RULE 407  
SOx: 150 PPMV, 40CFR60 SUBPART GG  
PM: 0.1 GR/SCF, RULE 409  
PM: 0.01 GR/SCF; 11 LBS/HR, RULE 475



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMIT TO OPERATE

Permit No. F92374  
A/N 402554

#### Equipment Description:

AIR POLLUTION CONTROL SYSTEM (CENTRAL PLANT) CONSISTING OF:

1. REACTOR, NOX SELECTIVE CATALYTIC REDUCTION (SCR), CRI CATALYST, WITH CAT VNX VANADIA-TITANIA CATALYST,
2. REACTOR, CO OXIDATION CATALYST, ENGELHARD, WITH CAMEL METAL CO OXIDATION TYPE CATALYST, AND
3. AMMONIA INJECTION SYSTEM.

#### Conditions:

- 1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]
- 2) THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
- 3) NH<sub>3</sub> EMISSIONS FROM THIS EQUIPMENT SHALL NOT EXCEED 5 PPMV @ 15% O<sub>2</sub>.  
[RULE 1303(a)(1)--BACT]
- 4) THE OPERATOR SHALL INSTALL AND MAINTAIN A TEMPERATURE GAUGE TO ACCURATELY INDICATE THE TEMPERATURE IN THE EXHAUST AT THE INLET TO THE SCR REACTOR. THE OPERATOR SHALL ALSO INSTALL AND MAINTAIN A DEVICE TO CONTINUOUSLY RECORD THE PARAMETER BEING MEASURED. THE MEASURING DEVICE OR GAUGE SHALL BE ACCURATE TO WITHIN PLUS OR MINUS 5 PERCENT, AND SHALL BE CALIBRATED ONCE EVERY TWELVE MONTHS.  
[RULE 3004(a)(4)—Periodic Monitoring]
- 5) THE OPERATOR SHALL CONDUCT SOURCE TEST(S) FOR THE POLLUTANT(S) IDENTIFIED BELOW:

POLLUTANT(S) TO BE TESTED	REQUIRED TEST METHOD(S)	AVG. TIME	TEST LOCATION
NH <sub>3</sub> EMISSIONS	DISTRICT METHOD 207.1 OR EPA METHOD 17	1 HOUR	SCR OUTLET



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## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

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THE TEST SHALL BE CONDUCTED AT LEAST TWICE EVERY YEAR FOR THE PERIOD STARTING JUNE 12, 2009. IF TWO CONSECUTIVE TESTS IN THAT PERIOD DEMONSTRATE COMPLIANCE, THEN THE TEST SHALL BE CONDUCTED AT LEAST ONCE EVERY YEAR THEREAFTER. THE NOX CONCENTRATION, AS DETERMINED BY THE CEMS, SHALL BE SIMULTANEOUSLY RECORDED DURING THE AMMONIA SLIP TEST. IF THE CEMS IS INOPERABLE, A TEST SHALL BE CONDUCTED TO DETERMINE THE NOX EMISSIONS USING DISTRICT METHOD 100.1 MEASURED OVER A 60 MINUTE AVERAGING TIME PERIOD.

THE TEST SHALL BE CONDUCTED WHEN THE GAS TURBINE IS OPERATING AT 100 PERCENT OF MAXIMUM HEAT INPUT. THE TEST SHALL BE CONDUCTED TO DEMONSTRATE COMPLIANCE WITH THE LIMIT SPECIFIED IN CONDITION NO. 3.  
[RULE 1303(a)(1)--BACT]

- 6) THE OPERATOR MAY, AT HIS DISCRETION, CHOSE NOT TO USE AMMONIA INJECTION IF THE FOLLOWING REQUIREMENT IS MET:

THE INLET EXHAUST TEMPERATURE TO THE SCR IS 400 DEGREES F OR LESS, NOT TO EXCEED 60 MINUTES DURING A STARTUP.  
[RULE 1303(a)(1)--BACT]

- 7) THE 5 PPMV NH3 EMISSION LIMITS IS AVERAGED OVER 60 MINUTES AT 15 PERCENT O2, DRY.  
[RULE 1303(a)(1)--BACT]
- 8) ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE MAINTAINED FOR AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO THE DISTRICT UPON REQUEST.  
[RULE 3004(a)(4)—Periodic Monitoring]

### **Emissions and Requirements:**

NH3: 5 PPMV, RULE 1303-BACT



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMIT TO OPERATE

Permit No. F92439  
A/N 408819

#### Equipment Description:

STORAGE TANK, ABOVEGROUND, AQUEOUS AMMONIA, 6'-4" DIA. X 23'-0" L., 5000 GALLON CAPACITY, WITH A VAPOR RETURN LINE.

#### Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. THIS TANK SHALL STORE AQUEOUS AMMONIA SOLUTIONS WHICH CONTAIN 19 PERCENT BY WEIGHT OF AMMONIA OR LESS.  
[RULE 1303(b)(2)—OFFSETS]
4. THE MAXIMUM QUANTITY OF AQUEOUS AMMONIA LOADED INTO THIS STORAGE TANK SHALL NOT EXCEED 5000 GALLONS IN ANY ONE MONTH.  
[RULE 1303(b)(2)—OFFSETS]
5. THE OPERATOR SHALL INSTALL AND MAINTAIN PRESSURE RELIEF VALVE(S) WITH A MINIMUM PRESSURE SET AT 25 PSIG.  
[RULE 1303(a)(1)—BACT]
6. THIS TANK SHALL NOT BE FILLED UNLESS THE DISPLACED VAPORS ARE RETURNED TO THE UNLOADING VEHICLE THROUGH A GAS TIGHT VAPOR LINE.  
[RULE 1303(a)(1)—BACT]
7. THE VAPOR RETURN SYSTEM SHALL BE IN FULL USE DURING THE LOADING OPERATION TO ENSURE COMPLETE RETURN OF THE DISPLACED VAPOR FROM THE TANK TO THE DELIVERY VEHICLE.  
[RULE 1303(a)(1)—BACT]
8. THE OPERATOR SHALL MAINTAIN ADEQUATE RECORDS TO DEMONSTRATE COMPLIANCE WITH CONDITION NOS. 3 AND 4. SUCH RECORDS SHALL BE KEPT ON THE PREMISES FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.  
[RULE 1303(a)(1)—BACT]



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

### **PERMIT TO CONSTRUCT/OPERATE**

**Permit No. F94315  
A/N 473777**

#### **Equipment Description:**

INTERNAL COMBUSTION ENGINE, JOHN DEERE, MODEL NO. 4045HF285J, DIESEL FUELED, FOUR CYCLE, FOUR CYLINDER, TURBOCHARGED AND AFTERCOOLED, RATED AT 126 BHP, DRIVING AN EMERGENCY ELECTRICAL GENERATOR, 94 KW (WATSON BLDG.).

#### **Conditions:**

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. THIS ENGINE SHALL NOT BE OPERATED MORE THAN A TOTAL OF 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 50 HOURS FOR MAINTENANCE AND PERFORMANCE TESTING.  
[RULE 1304(a)(4)-MODELING AND OFFSET EXEMPTION, RULE 1303(a)(1)-BACT, RULE 1470, RULE 1110.2]
4. THE OPERATION OF THIS ENGINE BEYOND THE 50 HOURS PER YEAR ALLOTTED FOR MAINTENANCE AND PERFORMANCE TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.  
[RULE 1303(a)(1)-BACT, RULE 1304(a)(4)-MODELING AND OFFSET EXEMPTION, RULE 1470]
5. THIS ENGINE SHALL NOT BE USED AS PART OF A DEMAND RESPONSE PROGRAM USING AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ITS ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.  
[RULE 1303(a)(1)-BACT, RULE 1470]
6. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:
  - A. EMERGENCY USE HOURS OF OPERATION,





## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

- B. MAINTENANCE AND TESTING HOURS, AND
- C. OTHER OPERATING HOURS, WITH A DESCRIPTION OF THE REASON FOR OPERATION

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION. THE LOG SHALL BE KEPT FOR A MINIMUM OF FIVE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOME TIME DURING THE FIRST 15 DAYS OF JANUARY EACH YEAR.  
[RULE 1110.2, RULE 1303(b)(2)—OFFSET, RULE 1470]

- 7. THE OPERATOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.  
[RULE 431.2, RULE 1470]
- 8. THE OPERATOR SHALL ONLY USE LOW SULFUR FUEL WITH A SULFUR CONTENT OF 15 PPM OR LESS BY WEIGHT.  
[RULE 431.2, RULE 1470]
- 9. MATERIAL SAFETY DATA SHEETS FOR THE DIESEL FUEL USED IN THIS ENGINE SHALL BE KEPT CURRENT AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.  
[RULE 431.2, RULE 1470]

### **Periodic Monitoring:**

- 10. THE OPERATOR SHALL INSTALL AND MAINTAIN AN OPERATIONAL NON-RESETTABLE ELAPSED OPERATING TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THE ENGINE.  
[RULE 1110.2, RULE 1470, RULE 3004(a)(4)-Periodic Monitoring]

### **Emissions and Requirements:**

- 11. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

### **PERMIT TO CONSTRUCT/OPERATE**

**Permit No. F97113  
A/N 476877**

#### **Equipment Description:**

INTERNAL COMBUSTION ENGINE, JOHN DEERE, MODEL NO. 6068HF485T DIESEL FUELED, FOUR CYCLE, SIX CYLINDER, TURBOCHARGED AND AFTERCOOLED, RATED AT 315 BHP, DRIVING AN EMERGENCY ELECTRICAL GENERATOR (CAHILL BLDG.).

#### **Conditions:**

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. THIS ENGINE SHALL NOT BE OPERATED MORE THAN A TOTAL OF 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 50 HOURS FOR MAINTENANCE AND PERFORMANCE TESTING.  
[RULE 1304(a)(4)-MODELING AND OFFSET EXEMPTION, RULE 1303(a)(1)-BACT, RULE 1470, RULE 1110.2]
4. THE OPERATION OF THIS ENGINE BEYOND THE 50 HOURS PER YEAR ALLOTTED FOR MAINTENANCE AND PERFORMANCE TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.  
[RULE 1303(a)(1)-BACT, RULE 1304(a)(4)-MODELING AND OFFSET EXEMPTION, RULE 1470]
5. THIS ENGINE SHALL NOT BE OPERATED FOR NON-EMERGENCY USE BETWEEN THE HOURS OF 7:30 A.M. AND 3:30 P.M. ON DAYS WHEN SCHOOL IS IN SESSION.  
[RULE 1470]
6. THIS ENGINE SHALL NOT BE USED AS PART OF A DEMAND RESPONSE PROGRAM USING AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ITS ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.  
[RULE 1303(a)(1)-BACT, RULE 1470]



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

7. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

- A. EMERGENCY USE HOURS OF OPERATION,
- B. MAINTENANCE AND TESTING HOURS, AND
- C. OTHER OPERATING HOURS, WITH A DESCRIPTION OF THE REASON FOR OPERATION

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION. THE LOG SHALL BE KEPT FOR A MINIMUM OF FIVE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOME TIME DURING THE FIRST 15 DAYS OF JANUARY EACH YEAR.

[RULE 1110.2, RULE 1303(b)(2)—OFFSET, RULE 1470]

8. THE OPERATOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.  
[RULE 431.2, RULE 1470]
9. THE OPERATOR SHALL ONLY USE LOW SULFUR FUEL WITH A SULFUR CONTENT OF 15 PPM OR LESS BY WEIGHT.  
[RULE 431.2, RULE 1470]
10. MATERIAL SAFETY DATA SHEETS FOR THE DIESEL FUEL USED IN THIS ENGINE SHALL BE KEPT CURRENT AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.  
[RULE 431.2, RULE 1470]

### **Periodic Monitoring:**

11. THE OPERATOR SHALL INSTALL AND MAINTAIN AN OPERATIONAL NON-RESETTABLE ELAPSED OPERATING TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THE ENGINE.  
[RULE 1110.2, RULE 1470, RULE 3004(a)(4)-Periodic Monitoring]

### **Emissions and Requirements:**

12. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

### **PERMIT TO CONSTRUCT/OPERATE**

**Permit No. N23305  
A/N 492430**

#### **Equipment Description:**

Fuel Storage and Dispensing Facility Consisting of:

1. 1 - GASOLINE BELLOWS-LESS NOZZLE DISPENSING 1 PRODUCT, EQUIPPED WITH PHASE II VAPOR RECOVERY SYSTEM, HEALY PHASE II EVR NOT INCLUDING ISD (VR-201-H).
2. 1 - DUAL COMPARTMENT UNDERGROUND GASOLINE/DIESEL STORAGE TANK, 12,000 GALLON CAPACITY, 1 METHANOL COMPATIBLE, CONSISTING OF:
  - A. ONE 6,000 GALLON GASOLINE COMPARTMENT, EQUIPPED WITH PHASE I VAPOR RECOVERY SYSTEM CNI MANUFACTURING (VR-104-A/D).
  - B. ONE 6,000 GALLON DIESEL COMPARTMENT, NOT EQUIPPED WITH PHASE I VAPOR RECOVERY SYSTEM.

#### **Conditions:**

1. OPERATION OF THIS EQUIPMENT SHALL BE IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT WAS ISSUED, UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. ALL PERMIT CONDITIONS APPLICABLE TO THE EQUIPMENT DESCRIBED IN THE PREVIOUS PERMIT TO OPERATE N16673 SHALL REMAIN IN EFFECT UNTIL THE NEW OR MODIFIED EQUIPMENT IS CONSTRUCTED AND OPERATED AS DESCRIBED IN THIS NEW PERMIT. THIS PERMIT TO CONSTRUCT/OPERATE SHALL BECOME INVALID IF THE MODIFICATION AS DESCRIBED IN THE EQUIPMENT DESCRIPTION HAS NOT BEEN COMPLETED WITHIN ONE YEAR FROM THE ISSUE DATE. IF THE MODIFICATION HAS NOT BEEN COMPLETED WITHIN ONE YEAR FROM THE ISSUE DATE OF THE PERMIT, A WRITTEN REQUEST SHALL BE SUBMITTED TO THE AQMD (ATTENTION: RANDY MATSUYAMA) TO REINSTATE THE PREVIOUSLY INACTIVATED PERMIT TO OPERATE. A NEW APPLICATION SHALL BE FILED IF THERE ARE PLANS TO CONTINUE WITH THE MODIFICATION. FURTHERMORE, THIS CONDITION DOES NOT ALLOW ANY TIME EXTENSIONS TO ANY MODIFICATIONS REQUIRED BY THE CALIFORNIA AIR RESOURCES BOARD OR AQMD.  
[RULE 461]
4. EXCEPT FOR DIESEL TRANSFERS, PHASE I VAPOR RECOVERY SYSTEMS SHALL BE IN FULL OPERATION WHENEVER FUEL IS BEING TRANSFERRED INTO STORAGE TANKS.



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

[RULE 461]

5. EXCEPT FOR DIESEL TRANSFERS, PHASE II VAPOR RECOVERY SYSTEMS SHALL BE IN FULL OPERATION WHENEVER FUEL IS BEING TRANSFERRED INTO MOTOR VEHICLES, AS DEFINED IN RULE 461.  
[RULE 461]
6. ALL PHASE I AND PHASE II VAPOR RECOVERY EQUIPMENT AT THIS FACILITY SHALL BE INSTALLED, OPERATED AND MAINTAINED TO MEET ALL CALIFORNIA AIR RESOURCES BOARD CERTIFICATION REQUIREMENTS.  
[RULE 461]
7. THE DISTRICT AT ITS DISCRETION MAY WISH TO WITNESS THE INSTALLATION AND/OR PERFORMANCE TESTING OF THE HEALY PHASE II EVR SYSTEM NOT INCLUDING ISD. AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO THE INSTALLATION AND PERFORMANCE TESTING OF THE HEALY PHASE II EVR SYSTEM NOT INCLUDING ISD, THE APPLICANT SHALL NOTIFY THE AQMD AT TELEPHONE NUMBER (866) 770-9140.  
[RULE 461]
8. NEW EQUIPMENT INSTALLATIONS AND SUBSEQUENT SERVICE AND REPAIRS FOR ANY CERTIFIED COMPONENT FOR WHICH THIS PERMIT WAS ISSUED, SHALL ONLY BE PERFORMED BY A CURRENT AND CERTIFIED PERSON WHO HAS SUCCESSFULLY COMPLETED THE MANUFACTURER'S TRAINING COURSE AND APPROPRIATE INTERNATIONAL CODE COUNCIL (ICC) CERTIFICATION. COMPLETION OF ANY AQMD TRAINING COURSE DOES NOT CONSTITUTE AS A SUBSTITUTE FOR THIS REQUIREMENT. PROOF OF SUCCESSFUL COMPLETION OF ANY MANUFACTURER TRAINING COURSE SHALL BE WITH THE MANUFACTURER.  
[RULE 461]
9. AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO BACK-FILLING ANY UNDERGROUND STORAGE TANK OR PIPING, THE SCAQMD SHALL BE NOTIFIED BY E-MAIL AT [R461BACKFILL@AQMD.GOV](mailto:R461BACKFILL@AQMD.GOV) OR BY FACSIMILE AT TELEPHONE NUMBER (909) 396-3606. SUCH NOTIFICATION SHALL INCLUDE THE NAME OF THE OWNER OR OPERATOR; THE NAME OF THE CONTRACTORS; THE LOCATION OF THE FACILITY; AND THE SCHEDULED START AND COMPLETION DATES OF THE BACK-FILLING PROCEDURE. THE BACK-FILLING PROCEDURE SHALL NOT COMMENCE UNTIL INSPECTED BY A DISTRICT REPRESENTATIVE.  
[RULE 461]
10. DEPENDING ON THE SYSTEM CONFIGURATION, A LEAK RATE TEST OF DROP TUBE/DRAIN VALVE ASSEMBLY SHALL BE CONDUCTED TO QUANTIFY THE PRESSURE INTEGRITY OF BOTH THE DROP TUBE AND DRAIN VALVE SEAL OR A LEAK RATE TEST OF DROP TUBE OVERFILL PREVENTION DEVICE AND DRAIN VALVE SHALL BE CONDUCTED TO QUANTIFY THE PRESSURE INTEGRITY OF THE DROP TUBE OVERFILL PREVENTION DEVICE AND THE PRESSURE INTEGRITY OF THE SPILL CONTAINER DRAIN VALVE. EITHER TEST SHALL BE CONDUCTED AS A PERFORMANCE TEST AND AS A REVERIFICATION TEST. THE TEST SHALL BE CONDUCTED IN ACCORDANCE WITH TEST PROCEDURE METHOD TP-201.1C (OCTOBER 8, 2003) OR TP-201.1D (OCTOBER 8, 2003), RESPECTIVELY. RESULTS SHALL BE SUBMITTED TO THE AQMD, OFFICE OF ENGINEERING AND COMPLIANCE, WITHIN SEVENTY-TWO (72) HOURS OF TEST.  
[RULE 461]



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

11. A LEAK RATE AND CRACKING PRESSURE TEST OF PRESSURE/VACUUM RELIEF VENT VALVES SHALL BE CONDUCTED WITHIN TEN DAYS (10) AFTER THE START OF OPERATION OF THE CNI MANUFACTURING PHASE I EVR EQUIPMENT AND AT LEAST ONCE EVERY THREE (3) YEARS THEREAFTER TO DETERMINE THE PRESSURE AND VACUUM AT WHICH THE PRESSURE/VACUUM VENT VALVE ACTUATES, AND TO DETERMINE THE VOLUMETRIC LEAK RATE AT A GIVEN PRESSURE. THE TEST SHALL BE CONDUCTED IN ACCORDANCE WITH THE TEST PROCEDURE METHOD TP-201.1E (OCTOBER 8, 2003). RESULTS SHALL BE SUBMITTED TO THE AQMD, OFFICE OF ENGINEERING AND COMPLIANCE, WITHIN SEVENTY-TWO (72) HOURS OF TEST. THIS TEST RESULT SHALL BE KEPT ON SITE FOR THREE (3) YEARS AND MADE AVAILABLE TO DISTRICT REPRESENTATIVES UPON REQUEST.  
[RULE 461]

12. A STATIC TORQUE TEST OF ROTATABLE PHASE I ADAPTORS SHALL BE CONDUCTED TO QUANTIFY THE AMOUNT OF STATIC TORQUE REQUIRED TO START THE ROTATION OF THE ROTATABLE PHASE I ADAPTORS. THE TEST SHALL BE CONDUCTED IN ACCORDANCE WITH THE TEST PROCEDURE METHOD OUTLINED IN TP-201.1B (OCTOBER 8, 2003) AS A PERFORMANCE TEST AND AS A REVERIFICATION TEST. RESULTS SHALL BE SUBMITTED TO THE AQMD, OFFICE OF ENGINEERING AND COMPLIANCE, WITHIN SEVENTY-TWO (72) HOURS OF TEST.  
[RULE 461]

13. THE PHASE II VAPOR RECOVERY SYSTEM SHALL BE INSTALLED, OPERATED, AND MAINTAINED SUCH THAT THE MAXIMUM ALLOWABLE PRESSURE THROUGH THE RISER, AND UNDERGROUND PIPING DOES NOT EXCEED THE DYNAMIC BACK PRESSURE DESCRIBED BY THE CALIFORNIA AIR RESOURCES BOARD EXECUTIVE ORDER BY WHICH THE SYSTEM WAS CERTIFIED:

NITROGEN FLOWRATES  
(CFH)  
60

DYNAMIC BACK PRESSURE  
(INCHES OF WATER)  
0.50

DYNAMIC BACK PRESSURE TESTS SHALL BE CONDUCTED TO DETERMINE THE PHASE II SYSTEM VAPOR RECOVERY BACK PRESSURES. THE TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH CARB TEST PROCEDURE TP-201.4, METHODOLOGY 4 AND 6 (JULY 3, 2002); AS A PERFORMANCE TEST. THIS TEST SHALL BE A ONE-TIME TEST AND THE RESULTS KEPT PERMANENTLY ON SITE. RESULTS SHALL BE SUBMITTED TO THE AQMD, OFFICE OF ENGINEERING AND COMPLIANCE, WITHIN SEVENTY-TWO (72) HOURS OF TESTS.  
[RULE 461]

14. A STATIC PRESSURE LEAK DECAY TEST SHALL BE CONDUCTED TO DEMONSTRATE THAT THE STORAGE TANKS, THE REMOTE AND/OR NOZZLE VAPOR RECOVERY CHECK VALVES, ASSOCIATED VAPOR RETURN PIPING AND FITTINGS ARE FREE FROM VAPOR LEAKS. THE TEST SHALL BE CONDUCTED IN ACCORDANCE WITH CARB TEST PROCEDURE METHOD TP-201.3 (MARCH 17, 1999) AS A PERFORMANCE TEST AND AS A REVERIFICATION TEST. RESULTS SHALL BE SUBMITTED TO THE AQMD, OFFICE OF ENGINEERING AND COMPLIANCE, WITHIN SEVENTY-TWO (72) HOURS OF TEST.  
[RULE 461]



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

15. A STATIC PRESSURE PERFORMANCE TEST FOR THE HEALY CLEAN AIR SEPARATOR USING BOTH THE VACUUM DECAY PROCEDURE AND THE POSITIVE PRESSURE PROCEDURE SHALL BE CONDUCTED TO QUANTIFY THE VAPOR TIGHTNESS OF THE HEALY CLEAN AIR SEPARATOR TANK PRESSURE MANAGEMENT SYSTEM. THESE TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH EXHIBIT 4 OF CARB EXECUTIVE ORDER VR-201-H AS A PERFORMANCE TEST AND AS A REVERIFICATION TEST. RESULTS SHALL BE SUBMITTED TO THE AQMD, OFFICE OF ENGINEERING AND COMPLIANCE WITHIN SEVENTY-TWO (72) HOURS OF TEST.  
[RULE 461]
16. A VAPOR TO LIQUID VOLUME RATIO TEST SHALL BE CONDUCTED TO QUANTIFY THE VAPOR TO LIQUID (V/L) VOLUMETRIC RATIO OF THE HEALY CLEAN AIR SEPARATOR SYSTEM. THE TEST SHALL BE CONDUCTED IN ACCORDANCE WITH EXHIBIT 5 OF CARB EXECUTIVE ORDER VR-201-H AS A PERFORMANCE TEST AND AS A REVERIFICATION TEST. RESULTS SHALL BE SUBMITTED TO THE AQMD, OFFICE OF ENGINEERING AND COMPLIANCE WITHIN SEVENTY-TWO (72) HOURS OF TEST.  
[RULE 461]
17. A NOZZLE BAG TEST SHALL BE CONDUCTED ON THE HEALY PHASE II EVR NOZZLES TO VERIFY THE INTEGRITY OF THE VAPOR VALVE. THE TEST SHALL BE CONDUCTED ON ANY NEWLY INSTALLED OR REPLACED HEALY PHASE II EVR NOZZLES AND IN ACCORDANCE WITH EXHIBIT 7 OF CARB EXECUTIVE ORDER VR-201-H. RESULTS SHALL BE SUBMITTED TO THE AQMD, OFFICE OF ENGINEERING AND COMPLIANCE WITHIN SEVENTY-TWO (72) HOURS OF TEST.  
[RULE 461]
18. THE STATIC PRESSURE LEAK DECAY TEST TP-201.3, SHALL BE CONDUCTED IN ACCORDANCE WITH EXHIBIT 8 OF CARB EXECUTIVE ORDER VR-201-H. VERIFICATION OF COMPLETING EACH STEP AS OUTLINED SHALL BE DOCUMENTED BY SUBMITTING A COPY OF EXHIBIT 8 TO THE AQMD, OFFICE OF ENGINEERING AND COMPLIANCE WITHIN SEVENTY-TWO (72) HOURS OF TEST.  
[RULE 461]
19. UNLESS AQMD RULE 461 REQUIRES A MORE FREQUENT TESTING OR INSPECTION SCHEDULE, THE OWNER/OPERATOR SHALL BE RESPONSIBLE TO PERFORM THE SCHEDULED WEEKLY, QUARTERLY, AND ANNUAL INSPECTIONS AS OUTLINED IN THE ARB APPROVED INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR THE HEALY PHASE II EVR SYSTEMS, AS WELL AS ALL THE REQUIRED VAPOR RECOVERY SYSTEM TESTS AS PER THE CURRENT AND APPROPRIATE ARB EXECUTIVE ORDER.  
[RULE 461]
20. A CARB CERTIFIED PHASE II ENHANCED VAPOR RECOVERY SYSTEM SHALL BE FULLY PERMITTED, INSTALLED, AND TESTED BY OCTOBER 1, 2008. FAILURE TO ACHIEVE THIS CONDITION BY OCTOBER 1, 2008, SHALL RESULT IN THE OWNER/OPERATOR TO FILE A DISTRICT APPROVED COMPLIANCE PLAN OUTLINING THE INCREMENTS OF PROGRESS TOWARDS COMPLETING THE INSTALLATION OF A CARB CERTIFIED PHASE II ENHANCED VAPOR RECOVERY SYSTEM BY APRIL 1, 2009.  
[RULE 461]



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

21. IF THE OWNER/OPERATOR PLANS TO PERMANENTLY CEASE ALL GASOLINE DISPENSING OPERATIONS BEFORE APRIL 1, 2009, A COMPLIANCE PLAN SHALL BE FILED DECLARING TO IRREVOCABLY SURRENDER THEIR PERMIT TO OPERATE.  
[RULE 461]
22. THE AQMD SHALL BE NOTIFIED BY E-MAIL AT [R461TESTING@AQMD.GOV](mailto:R461TESTING@AQMD.GOV) OR BY FACSIMILE AT TELEPHONE NUMBER (909) 396-3606 AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO ANY OF THE ABOVE MENTIONED TESTING REQUIREMENTS. SUCH NOTIFICATION SHALL INCLUDE THE NAME OF THE OWNER OR OPERATOR; THE NAME OF THE CONTRACTOR; THE LOCATION OF THE FACILITY; AND THE SCHEDULED START AND COMPLETION DATES OF THE TESTS TO BE PERFORMED.  
[RULE 461]
23. THE TESTING FOR THE ABOVE MENTIONED TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH THE MOST RECENT RULE 461 AMENDMENT OR CARB EXECUTIVE ORDER REQUIREMENTS, WHICHEVER IS MORE STRINGENT.  
[RULE 461]
24. ALL RECORDS AND TEST RESULTS THAT ARE REQUIRED TO BE MAINTAINED BY RULE 461 SHALL BE KEPT ON SITE FOR FOUR YEARS AND MADE AVAILABLE TO DISTRICT REPRESENTATIVES UPON REQUEST.  
[RULE 461]
25. SHOULD THE FACILITY DISPENSE MORE THAN 600,000 GALLONS OF GASOLINE PER CALENDAR YEAR AND IF THE FACILITY UNDERGOES A MAJOR MODIFICATION AS DEFINED BY CARB'S ADVISORY LETTER NUMBER 336, "ENHANCED VAPOR RECOVERY IMPLEMENTATION UPDATE" DATED APRIL 15, 2005; THE OPERATOR SHALL IMMEDIATELY CEASE ALL GASOLINE DISPENSING OPERATIONS AND FILE AN APPLICATION FOR A NEW PERMIT TO CONSTRUCT/OPERATE TO INSTALL A CARB CERTIFIED ISD SYSTEM. GASOLINE DISPENSING OPERATIONS SHALL NOT RESUME UNTIL THE ISD SYSTEM HAS BEEN GRANTED A PERMIT TO CONSTRUCT/OPERATE AND HAS BEEN FULLY INSTALLED, TESTED, AND OPERATIVE.
26. SHOULD THE FACILITY DISPENSE MORE THAN 600,000 GALLONS OF GASOLINE IN ANY CALENDAR YEAR AND IF THE FACILITY DOES NOT UNDERGO A MAJOR MODIFICATION AS DEFINED BY CARB'S ADVISORY LETTER NUMBER 336, "ENHANCED VAPOR RECOVERY IMPLEMENTATION UPDATE" DATED APRIL 15, 2005; THE OPERATOR SHALL FILE AN APPLICATION FOR A NEW PERMIT TO CONSTRUCT/OPERATE TO INSTALL A CARB CERTIFIED ISD SYSTEM. THE ISD SYSTEM SHALL BE FULLY INSTALLED, TESTED, AND OPERATIVE BASED ON THE FOLLOWING TABLE:

<u>GASOLINE THROUGHPUT PER CALENDAR YEAR</u>
GREATER THAN 1.8 MILLION GALLONS
BETWEEN 600,000 AND 1.8 MILLION GALLONS

<u>DATE</u>
SEPTEMBER 1, 2009
SEPTEMBER 1, 2010

[RULE 461]





## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

### **Periodic Monitoring:**

27. THE OPERATOR SHALL HAVE A PERSON THAT HAS BEEN TRAINED IN ACCORDANCE WITH RULE 461(d)(5) CONDUCT A SEMI-ANNUAL INSPECTION OF THE GASOLINE TRANSFER AND DISPENSING EQUIPMENT. THE FIRST INSPECTION SHALL BE IN ACCORDANCE WITH RULE 461, ATTACHMENT B, THE SECOND INSPECTION SHALL BE IN ACCORDANCE WITH RULE 461, ATTACHMENT C, AND THE SUBSEQUENT INSPECTIONS SHALL ALTERNATE PROTOCOLS. THE OPERATOR SHALL KEEP RECORDS OF THE INSPECTION AND THE REPAIRS IN ACCORDANCE TO RULE 461 AND SECTION K OF THIS PERMIT.  
[RULE 3004 (a)(4)]

### **Emissions And Requirements:**

28. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:
- VOC: RULE 461  
VOC: RULE 1170



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMIT TO OPERATE

Permit No. G6134  
A/N 473550

#### Equipment Description:

INTERNAL COMBUSTION ENGINE, CUMMINS, MODEL NO. 6BT5.9-G2, DIESEL FUELED, 6 CYLINDERS, TURBOCHARGED, AFTERCOOLED, RATED AT 166 BHP, EQUIPPED WITH DIESEL PARTICULATE FILTER SYSTEM, CLEANAIR SYSTEMS, PERMIT™ MODEL FCA225, AND A HIBACK DATA LOGGING AND ALARM SYSTEM WITH BACK PRESSURE MONITOR (SOUTH MUDD BLDG).

#### Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. THIS ENGINE SHALL NOT BE OPERATED MORE THAN A TOTAL OF 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 75 HOURS FOR MAINTENANCE AND PERFORMANCE TESTING PURPOSES.  
[RULE 1304(a)(4)-MODELING AND OFFSET EXEMPTION, RULE 1470, RULE 1110.2]
4. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:
  - A. EMERGENCY USE HOURS OF OPERATION,
  - B. MAINTENANCE AND TESTING HOURS, AND
  - C. OTHER OPERATING HOURS, WITH A DESCRIPTION OF THE REASON FOR OPERATION.

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION. THE LOG SHALL BE KEPT FOR A MINIMUM OF FIVE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOME TIME DURING THE FIRST 15 DAYS OF JANUARY EACH YEAR.

[RULE 1110.2, RULE 1303(b)(2)—OFFSET, RULE 1470]

5. OPERATION OF THIS ENGINE BEYOND THE 75 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENANCE AND PERFORMANCE TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.

[RULE 1304(a)(4)-MODELING AND OFFSET EXEMPTION, RULE 1470]

6. THIS ENGINE SHALL NOT BE OPERATED FOR NON-EMERGENCY USE BETWEEN THE HOURS OF 7:30 A.M. AND 3:30 P.M. ON DAYS WHEN SCHOOL IS IN SESSION.  
[RULE 1470]
7. THE OPERATOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.  
[RULE 431.2, RULE 1470]
8. THIS ENGINE SHALL NOT BE USED AS PART OF A DEMAND RESPONSE PROGRAM USING AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ITS ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.  
[RULE 1470]
9. THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS IT IS VENTED TO A DIESEL PARTICULATE FILTER SYSTEM WHICH IS IN FULL OPERATION AND IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 1470]
10. THE OPERATOR SHALL OPERATE THE DIESEL PARTICULATE FILTER SYSTEM ONLY WITH AN OPERATIONAL HIBACK DATA LOGGING AND ALARM SYSTEM WITH BACK PRESSURE MONITOR AND TEMPERATURE MONITOR.  
[RULE 1470]
11. THE HIBACK DATA LOGGING AND ALARM SYSTEM SHALL BE PROGRAMMED TO PROVIDE A RED WARNING SIGNAL AND AN AUDIBLE ALARM, WHENEVER THE ENGINE BACKPRESSURE REACHES THE MAXIMUM BACKPRESSURE LIMIT OF 3 INCHES OF MERCURY (HG). IN OPERATION, THE ENGINE BACKPRESSURE SHALL NOT EXCEED 3 INCHES OF MERCURY (HG).  
[RULE 1470]
12. THE ENGINE SHALL BE OPERATED AT THE LOAD LEVEL REQUIRED TO ACHIEVE AN ENGINE EXHAUST GAS TEMPERATURE OF 572 DEGREES FAHRENHEIT (300 DEGREES CENTIGRADE) FOR PASSIVE REGENERATION OF THE DIESEL PARTICULATE FILTER FOR AT LEAST 30% OF THE OPERATING TIME.  
[RULE 1470]
13. THIS ENGINE SHALL NOT BE OPERATED BELOW THE PASSIVE REGENERATION TEMPERATURE SPECIFIED IN CONDITION NO. 12 FOR MORE THAN 240 CONSECUTIVE MINUTES.  
[RULE 1470]
14. THE OPERATOR SHALL REGENERATE THE DIESEL PARTICULATE FILTER AFTER EVERY 12 COLD STARTS OR WHENEVER A YELLOW WARNING SIGNAL INDICATING THE BACKPRESSURE IS 10% BELOW THE MAXIMUM BACKPRESSURE LIMIT SPECIFIED IN CONDITION NO. 11 IS RECEIVED FROM THE HIBACK ALARM SYSTEM, WHICHEVER OCCURS FIRST. IN ORDER TO ACHIEVE FILTER REGENERATION, THE OPERATOR SHALL OPERATE THE ENGINE AT THE LOAD



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

REQUIRED TO ACHIEVE AN EXHAUST TEMPERATURE ABOVE 572 DEGREES FAHRENHEIT (300 DEGREES C) UNTIL THE BACKPRESSURE MONITORING SYSTEM INDICATES A NORMAL BACK PRESSURE READING.

[RULE 1470]

15. THE DIESEL PARTICULATE FILTER SHALL BE CLEANED WHENEVER THE BACKPRESSURE REACHES THE MAXIMUM BACKPRESSURE LIMIT SPECIFIED IN CONDITION NO. 11. CLEANING SHALL BE PERFORMED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS IN THE INSTALLATION AND MAINTENANCE MANUAL.  
[RULE 1470]
16. AFTER EVERY 200 HOURS OF NORMAL ENGINE OPERATION, THE OPERATOR SHALL INSPECT THE INTEGRITY OF THE DIESEL PARTICULATE FILTER AND, IF NECESSARY, REPLACE IT.  
[RULE 1470]
17. THE OPERATOR SHALL MAINTAIN RECORDS OF DIESEL PARTICULATE FILTER INSPECTIONS, REPLACEMENTS AND CLEANING FOR A MINIMUM OF FIVE YEARS. THE RECORDS SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.  
[RULE 1470]
18. THE OPERATOR SHALL MAINTAIN MONTHLY RECORDS OF EXHAUST TEMPERATURE, ENGINE BACK PRESSURE, DATE AND TIME FOR THE DUTY CYCLE OF THE ENGINE AS RECORDED BY THE HIBACK DATA LOGGING AND ALARM SYSTEM FOR A MINIMUM OF FIVE YEARS. THESE RECORDS SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.  
[RULE 1470]
19. THE OPERATOR SHALL ONLY USE LOW SULFUR FUEL WITH A SULFUR CONTENT OF 15 PPM OR LESS BY WEIGHT.  
[RULE 431.2, RULE 1470]
20. MATERIAL SAFETY DATA SHEETS FOR THE DIESEL FUEL USED IN THIS ENGINE SHALL BE KEPT CURRENT AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.  
[RULE 431.2, RULE 1470]

### **Periodic Monitoring:**

21. THE OPERATOR SHALL INSTALL AND MAINTAIN AN OPERATIONAL NON-RESETTABLE ELAPSED OPERATING TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THE ENGINE.  
[RULE 1110.2, RULE 1470, RULE 3004(a)(4)-Periodic Monitoring]

### **Emissions and Requirements:**

22. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

### **PERMIT TO OPERATE**

**Permit No. G6133  
A/N 406489**

#### **Equipment Description:**

INTERNAL COMBUSTION ENGINE, CUMMINS, MODEL NO. N14-G2, DIESEL-FUELED, FOUR- CYCLE, 6 CYLINDERS, TURBOCHARGED, AFTERCOOLED, RATED AT 535 BHP, EQUIPPED WITH A DIESEL PARTICULATE FILTER SYSTEM, CLEANAIR SYSTEMS, PERMIT™ MODEL FCA225, AND A HIBACK DATA LOGGING AND ALARM SYSTEM WITH BACK PRESSURE MONITOR, DRIVING AN EMERGENCY ELECTRICAL GENERATOR, 399 KW (CENTRAL PLANT).

#### **Conditions:**

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. THIS ENGINE SHALL NOT BE OPERATED MORE THAN A TOTAL OF 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 50 HOURS FOR MAINTENANCE AND PERFORMANCE TESTING.  
[RULE 1110.2, RULE 1470, RULE 1303(A)(1)-BACT, RULE 1304(A)(4)-MODELING AND OFFSET EXEMPTION]
4. THE OPERATION OF THIS ENGINE BEYOND THE 50 HOURS PER YEAR ALLOTTED FOR MAINTENANCE AND PERFORMANCE TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.  
[RULE 1303(A)(1)-BACT, RULE 1304(A)(4)-MODELING AND OFFSET EXEMPTION, RULE 1470]
5. THIS ENGINE SHALL NOT BE OPERATED FOR NON-EMERGENCY USE BETWEEN THE HOURS OF 7:30 A.M. AND 3:30 P.M. ON DAYS WHEN SCHOOL IS IN SESSION.  
[RULE 1470]
6. THIS ENGINE SHALL NOT BE USED AS PART OF A DEMAND RESPONSE PROGRAM USING AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ITS ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

[RULE 1303(A)(1)-BACT, RULE 1470]

7. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

- A. EMERGENCY USE HOURS OF OPERATION,
- B. MAINTENANCE AND TESTING HOURS, AND
- C. OTHER OPERATING HOURS, WITH A DESCRIPTION OF THE REASON FOR OPERATION.

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION. THE LOG SHALL BE KEPT FOR A MINIMUM OF FIVE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOME TIME DURING THE FIRST 15 DAYS OF JANUARY EACH YEAR.

[RULE 1110.2, RULE 1303(B)(2)—OFFSET, RULE 1470]

8. THE OPERATOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF RULE 1470.  
[RULE 1470]
9. THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS IT IS VENTED TO A DIESEL PARTICULATE FILTER SYSTEM WHICH IS IN FULL OPERATION AND IN GOOD OPERATING CONDITION AT ALL TIMES.  
RULE 1470]
10. THE OPERATOR SHALL OPERATE THE DIESEL PARTICULATE FILTER SYSTEM ONLY WITH AN OPERATIONAL HIBACK DATA LOGGING AND ALARM SYSTEM WITH BACK PRESSURE MONITOR AND TEMPERATURE MONITOR.  
[RULE 1470]
11. THE HIBACK DATA LOGGING AND ALARM SYSTEM SHALL BE PROGRAMMED TO PROVIDE A RED WARNING SIGNAL AND AN AUDIBLE ALARM, WHENEVER THE ENGINE BACKPRESSURE REACHES THE MAXIMUM BACKPRESSURE LIMIT OF 41 INCHES OF WATER. IN OPERATION, THE ENGINE BACKPRESSURE SHALL NOT EXCEED 41 INCHES OF WATER.  
[RULE 1470]
12. THE ENGINE SHALL BE OPERATED AT THE LOAD LEVEL REQUIRED TO ACHIEVE AN ENGINE EXHAUST GAS TEMPERATURE OF 572 DEGREES FAHRENHEIT (300 DEGREES CENTIGRADE) FOR PASSIVE REGENERATION OF THE DIESEL PARTICULATE FILTER FOR AT LEAST 30% OF THE OPERATING TIME.  
[RULE 1470]
13. THIS ENGINE SHALL NOT BE OPERATED BELOW THE PASSIVE REGENERATION TEMPERATURE SPECIFIED IN CONDITION NO. 12 FOR MORE THAN 240 CONSECUTIVE MINUTES.  
[RULE 1470]
14. THE OPERATOR SHALL REGENERATE THE DIESEL PARTICULATE FILTER AFTER EVERY 12 COLD STARTS OR WHENEVER A YELLOW WARNING SIGNAL INDICATING THE BACKPRESSURE IS 10% BELOW THE MAXIMUM BACKPRESSURE LIMIT SPECIFIED IN CONDITION NO. 11 IS RECEIVED FROM THE HIBACK ALARM SYSTEM, WHICHEVER OCCURS FIRST. IN ORDER TO



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

ACHIEVE FILTER REGENERATION, THE OPERATOR SHALL OPERATE THE ENGINE AT THE LOAD REQUIRED TO ACHIEVE AN EXHAUST TEMPERATURE ABOVE 572 DEGREES FAHRENHEIT (300 DEGREES C) UNTIL THE BACKPRESSURE MONITORING SYSTEM INDICATES A NORMAL BACK PRESSURE READING.

[RULE 1470]

15. THE DIESEL PARTICULATE FILTER SHALL BE CLEANED WHENEVER THE BACKPRESSURE REACHES THE MAXIMUM BACKPRESSURE LIMIT SPECIFIED IN CONDITION NO. 11. CLEANING SHALL BE PERFORMED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS IN THE INSTALLATION AND MAINTENANCE MANUAL.  
[RULE 1470]
16. AFTER EVERY 200 HOURS OF NORMAL ENGINE OPERATION, THE OPERATOR SHALL INSPECT THE INTEGRITY OF THE DIESEL PARTICULATE FILTER AND, IF NECESSARY, REPLACE IT.  
[RULE 1470]
17. THE OPERATOR SHALL MAINTAIN RECORDS OF DIESEL PARTICULATE FILTER INSPECTIONS, REPLACEMENTS AND CLEANING FOR A MINIMUM OF FIVE YEARS. THE RECORDS SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.  
[RULE 1470]
18. THE OPERATOR SHALL MAINTAIN MONTHLY RECORDS OF EXHAUST TEMPERATURE, ENGINE BACK PRESSURE, DATE AND TIME FOR THE DUTY CYCLE OF THE ENGINE AS RECORDED BY THE HIBACK DATA LOGGING AND ALARM SYSTEM FOR A MINIMUM OF FIVE YEARS. THESE RECORDS SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.  
[RULE 1470]
19. THE OPERATOR SHALL ONLY USE LOW SULFUR FUEL WITH A SULFUR CONTENT OF 15 PPM OR LESS BY WEIGHT.  
[RULE 431.2, RULE 1470]
20. MATERIAL SAFETY DATA SHEETS FOR THE DIESEL FUEL USED IN THIS ENGINE SHALL BE KEPT CURRENT AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.  
[RULE 431.2, RULE 1470]

### **Periodic Monitoring:**

21. AN OPERATIONAL NON-RESETTABLE ELAPSED OPERATING TIME METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.  
[RULE 1110.2, RULE 1470, RULE 3004(a)(4)-Periodic Monitoring]

### **Emissions and Requirements:**

22. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

### **PERMIT TO OPERATE**

*Note: This boiler will be replaced by new boiler, A/N 509331.*

**Permit No. G6772  
A/N 446735**

#### **Equipment Description:**

BOILER, NO. 1, BABCOCK AND WILCOX, WATERTUBE TYPE, MODEL NO. FM10-70B, WITH A 63,000,000 BTU PER HOUR NATURAL GAS FIRED LOW NOX BURNER, COEN, MODEL NO. FIR-63, WITH A 40 HP COMBUSTION AIR BLOWER, 15 HP RECIRCULATION FAN AND A FORCED FLUE GAS RECIRCULATION SYSTEM.

#### **Conditions:**

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. THIS EQUIPMENT SHALL BE FIRED ON NATURAL GAS.  
[RULE 1146]
4. THIS BOILER SHALL EMIT NO MORE THAN 30 PPM OF OXIDES OF NITROGEN, CALCULATED AS NO<sub>2</sub>, AND 400 PPM OF CARBON MONOXIDE, ALL MEASURED BY VOLUME ON A DRY BASIS AT 3% O<sub>2</sub>.  
[RULE 1146]
5. AN OPERATIONAL NON-RESETTABLE TOTALIZING FUEL METER SHALL BE INSTALLED AND MAINTAINED ON THIS EQUIPMENT TO RECORD THE FUEL USAGE.  
[RULE 1146]
6. THE FLUE GAS RECIRCULATION SYSTEM SHALL BE IN FULL OPERATION AND KEPT IN FULL OPERATION WHENEVER THE BOILER IS IN OPERATION.  
[RULE 1146]
7. THE OPERATOR SHALL HAVE THE BURNER EQUIPPED WITH A CONTROL SYSTEM TO AUTOMATICALLY REGULATE THE COMBUSTION AIR, FUEL AND RECIRCULATED FLUE GAS AS THE BOILER LOAD VARIES. THE CONTROL SYSTEM SHALL BE ADJUSTED AND TUNED AT LEAST ONCE A YEAR ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS TO MAINTAIN ITS ABILITY TO REPEAT THE SAME PERFORMANCE AT THE SAME FIRING RATE.  
[RULE 1146]
8. RECORDS OF SUCH ADJUSTMENTS, TUNE-UPS, AND CALIBRATIONS AS STATED IN CONDITION NO. 7 SHALL BE KEPT FOR AT LEAST TWO YEARS AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.





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## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

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[RULE 1146]

9. THE COMBUSTION BURNER SHALL BE INSPECTED AND MAINTAINED PER MANUFACTURER SPECIFICATIONS. RECORDS SHALL BE MAINTAINED FOR THE INSPECTIONS AND MAINTENANCE OF THE BURNER.  
[RULE 1146]
10. ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE KEPT FOR A MINIMUM OF TWO YEARS AND BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.  
[RULE 1146]
11. THIS BOILER SHALL BE OPERATED IN COMPLIANCE WITH THE REQUIREMENTS OF RULE 1146.  
[RULE 1146]
12. THE OPERATOR SHALL COMPLY WITH RULE 218 BY OPERATING AN OXIDES OF NITROGEN CONTINUOUS EMISSIONS MONITORING SYSTEM.  
[RULE 218, RULE 1146]

### Emissions And Requirements:

13. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NOX: 30 PPMV, RULE 1146  
CO: 2000 PPMV, RULE 407  
CO: 400 PPMV, RULE 1146  
SOX: 500 PPMV, RULE 407  
PM: 0.1 GR/SCF, RULE 409



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

### **PERMIT TO CONSTRUCT/OPERATE**

**Permit No. G8582  
A/N 507240**

#### **Equipment Description:**

SPRAY BOOTH, BLEEKER, FLOOR TYPE, MODEL ASDS-20, 20'-0" W. X 28'-4" L. X 9'-6" H., WITH TWENTY-TWO 20" X 20" EXHAUST FILTERS AND TWO 1.5 H.P. EXHAUST FANS

#### **Conditions:**

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. THE SPRAY BOOTH SHALL NOT BE OPERATED UNLESS ALL EXHAUST AIR PASSES THROUGH FILTER MEDIA WHICH IS AT LEAST TWO INCHES THICK.  
[RULE 1303(a)(1)-BACT]
4. A GAUGE SHALL BE INSTALLED TO INDICATE, IN INCHES OF WATER, THE STATIC PRESSURE DIFFERENTIAL ACROSS THE EXHAUST FILTERS. IN OPERATION, THE PRESSURE DIFFERENTIAL SHALL NOT EXCEED 0.25 INCH OF WATER.  
[RULE 1303(a)(1)-BACT]
5. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH RULES 1107, 1136, AND 1171.  
[RULE 1107, RULE 1136, RULE 1171]
6. MATERIALS USED IN THIS EQUIPMENT SHALL NOT CONTAIN ANY CARCINOGENIC AIR CONTAMINANTS IDENTIFIED IN RULE 1401, TABLE I, WITH AN EFFECTIVE DATE OF JUNE 5, 2009 OR EARLIER EXCEPT FORMALDEHYDE (CAS NO 50-00-0).  
[RULE 1401]
7. THE CONCENTRATION OF FORMALDEHYDE IN THE MATERIALS USED IN THIS EQUIPMENT SHALL NOT EXCEED 1% BY WEIGHT AS SUPPLIED.  
[RULE 1401]
8. THE TOTAL QUANTITY OF COATINGS AND SOLVENTS USED IN THIS EQUIPMENT AND IN ASSOCIATED OPERATIONS SHALL NOT EXCEED 6 GALLONS IN ANY ONE DAY. THIS TOTAL QUANTITY INCLUDES MATERIALS CONTAINING FORMALDEHYDE (CAS NO 50-00-0). ASSOCIATED OPERATIONS INCLUDE, BUT ARE NOT LIMITED TO, SURFACE PREPARATION, EQUIPMENT CLEAN-UP, AND THE APPLICATION OF ANY OTHER MATERIALS TO PARTS THAT ARE SUBSEQUENTLY PROCESSED IN THIS EQUIPMENT.  
[RULE 1303(b)(2)-OFFSET, RULE 1401]



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

9. MATERIAL SAFETY DATA SHEETS FOR ALL MATERIALS USED AT THIS FACILITY SHALL BE KEPT CURRENT AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.  
[RULE 1401]
10. THE OPERATOR SHALL COMPLY WITH RULE 109 (RECORDKEEPING FOR VOLATILE ORGANIC COMPOUND EMISSIONS).  
[RULE 109]
11. IN ADDITION TO THE RECORDKEEPING REQUIREMENTS OF RULE 109, THE OPERATOR SHALL KEEP ADEQUATE RECORDS FOR THIS EQUIPMENT TO VERIFY THE DAILY COATINGS AND SOLVENTS USAGE. THESE RECORDS SHALL BE PREPARED IN A FORMAT WHICH IS ACCEPTABLE TO THE DISTRICT.  
[RULE 1303(b)(2)-OFFSET]
12. THE OPERATOR SHALL MAINTAIN A SINGLE LIST WHICH INCLUDES ONLY THE NAME AND ADDRESS OF EACH PERSON FROM WHOM THE FACILITY ACQUIRED VOC-CONTAINING MATERIAL REGULATED BY THE DISTRICT THAT WAS USED OR STORED AT THE FACILITY DURING THE PRECEDING 12 MONTHS.  
[RULE 1303(b)(2)-OFFSET]
13. THE OPERATOR SHALL RETAIN ALL PURCHASE INVOICES FOR ALL VOC CONTAINING MATERIAL USED OR STORED AT THE FACILITY, AND ALL WASTE MANIFESTS FOR ALL WASTE VOC-CONTAINING MATERIAL REMOVED FROM THE FACILITY FOR 24 MONTHS.  
[RULE 1303(b)(2)-OFFSET]
14. ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED AT THE FACILITY FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO ANY DISTRICT REPRESENTATIVE UPON REQUEST.  
[RULE 109, RULE 1303(b)(2)-OFFSET]
15. THE OPERATOR SHALL NOT OPERATE THIS EQUIPMENT UNTIL THE OPERATION OF THE SPRAY BOOTH BEING REPLACED, PERMITTED UNDER P69655, IS SHUT DOWN.  
[RULE 1304(a)(1)]

### **Periodic Monitoring:**

16. THE OPERATOR SHALL DETERMINE AND RECORD THE PRESSURE DROP ACROSS THE FILTER MEDIA ONCE EVERY WEEK.  
[RULE 3004 (a)(4)]
17. THE OPERATOR SHALL PERFORM A WEEKLY INSPECTION OF THE EQUIPMENT AND FILTER MEDIA FOR LEAKS, BROKEN OR TORN FILTER MEDIA AND IMPROPERLY INSTALLED FILTER MEDIA. THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):
  - A. THE NAME OF THE PERSON PERFORMING THE INSPECTION AND/OR MAINTENANCE OF THE FILTER MEDIA;
  - B. THE DATE, TIME AND RESULTS OF THE INSPECTION; AND



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## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

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C. THE DATE, TIME AND DESCRIPTION OF ANY MAINTENANCE OR REPAIRS RESULTING  
FROM THE INSPECTION.

[RULE 3004 (a)(4)]

**Emissions and Requirements:**

18. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES  
AND REGULATIONS:

VOC: RULE 109

VOC: RULE 1107, SEE APPENDIX B FOR EMISSION LIMITS

VOC: RULE 1136, SEE APPENDIX B FOR EMISSION LIMITS

VOC: RULE 1171, SEE APPENDIX B FOR EMISSION LIMITS

VOC: RULE 481



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

### **PERMIT TO OPERATE**

**Permit No. G10255  
A/N 502626**

#### **Equipment Description:**

INTERNAL COMBUSTION ENGINE, CUMMINS, MODEL NO. QST30-G5, DIESEL-FUELED, FOUR- CYCLE, 12 CYLINDERS, TURBOCHARGED, AFTERCOOLED, RATED AT 1490 BHP, EQUIPPED WITH A DIESEL PARTICULATE FILTER SYSTEM, CLEANAIR SYSTEMS, MODEL PERMIT™, AND A HIBACK DATA LOGGING AND ALARM SYSTEM WITH BACK PRESSURE MONITOR, DRIVING AN EMERGENCY ELECTRICAL GENERATOR, 1000 KW (SCHLINGER LABORATORY).

#### **Conditions:**

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. THIS ENGINE SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF RULE 431.2 AND RULE 1470.  
[RULE 431.2, RULE 1470]
4. THIS ENGINE SHALL NOT BE OPERATED MORE THAN 200 HOURS IN ANY ONE YEAR, WHICH INCLUDES NO MORE THAN 50 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING AND NO MORE THAN 4.2 HOURS IN ANY ONE MONTH FOR MAINTENANCE AND TESTING.  
[RULE 1110.2, RULE 1470, RULE 1303(a)(1)-BACT, RULE 1304(a)(4)]
5. OPERATING BEYOND THE 50 HOURS PER YEAR ALLOTTED FOR MAINTENANCE AND TESTING PURPOSES SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE UTILITY DISTRIBUTION COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.  
[RULE 1303(a)(1)-BACT, RULE 1470]
6. AN OPERATIONAL NON-RESETTABLE ELAPSED TIME METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.  
[RULE 1110.2, RULE 1470, RULE 1303(a)(1)-BACT, RULE 1304(a)(4)]



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

7. AN ENGINE OPERATING LOG SHALL BE KEPT AND MAINTAINED, DOCUMENTING THE TOTAL TIME THE ENGINE IS OPERATED EACH MONTH AND SPECIFIC REASON FOR OPERATION AS:
- A. EMERGENCY USE.
  - B. MAINTENANCE AND TESTING.
  - C. OTHER (DESCRIBE THE REASON FOR OPERATING).

IN ADDITION, EACH TIME THE ENGINE IS MANUALLY STARTED, THE LOG SHALL INCLUDE THE DATE OF OPERATION, THE SPECIFIC REASON FOR OPERATION, AND THE TOTALIZING HOUR METER READING (IN HOURS AND TENTHS OF HOURS) AT THE BEGINNING AND END OF OPERATION.

[RULE 1110.2, RULE 1470]

8. ON OR BEFORE JANUARY 15TH OF EACH YEAR, THE OPERATOR SHALL RECORD IN THE ENGINE OPERATING LOG THE FOLLOWING:
- A. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR, AND
  - B. THE TOTAL HOURS OF ENGINE OPERATION FOR MAINTENANCE AND TESTING FOR THE PREVIOUS CALENDAR YEAR.

THE ENGINE OPERATING LOG SHALL BE RETAINED ON SITE FOR A MINIMUM OF FIVE CALENDAR YEARS AND SHALL BE MADE AVAILABLE TO THE EXECUTIVE OFFICER OR REPRESENTATIVE UPON REQUEST.

[RULE 1110.2, RULE 1470, RULE 3004]

9. THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS IT IS VENTED TO A DIESEL PARTICULATE FILTER SYSTEM WHICH IS IN FULL OPERATION AND IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 1303(a)(1)-BACT]
10. THE OPERATOR SHALL OPERATE THE DIESEL PARTICULATE FILTER SYSTEM ONLY WITH AN OPERATIONAL HIBACK DATA LOGGING AND ALARM SYSTEM WITH BACK PRESSURE MONITOR AND TEMPERATURE MONITOR.  
[RULE 1303(a)(1)-BACT]
11. THE HIBACK DATA LOGGING AND ALARM SYSTEM SHALL BE PROGRAMMED TO PROVIDE A RED WARNING SIGNAL AND AN AUDIBLE ALARM, WHENEVER THE ENGINE BACKPRESSURE REACHES THE MAXIMUM BACKPRESSURE LIMIT OF 32 INCHES OF WATER. IN OPERATION, THE ENGINE BACKPRESSURE SHALL NOT EXCEED 32 INCHES OF WATER.  
[RULE 1303(a)(1)-BACT]
12. THE ENGINE SHALL BE OPERATED AT THE LOAD LEVEL REQUIRED TO ACHIEVE AN ENGINE EXHAUST GAS TEMPERATURE OF 662 DEGREES FAHRENHEIT (350 DEGREES CENTIGRADE) FOR PASSIVE REGENERATION OF THE DIESEL PARTICULATE FILTER FOR AT LEAST 30% OF THE OPERATING TIME.  
[RULE 1303(a)(1)-BACT]
13. THIS ENGINE SHALL NOT BE OPERATED BELOW THE PASSIVE REGENERATION TEMPERATURE SPECIFIED IN CONDITION NO. 12 FOR MORE THAN 240 CONSECUTIVE MINUTES.  
[RULE 1303(a)(1)-BACT]



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

14. THE OPERATOR SHALL REGENERATE THE DIESEL PARTICULATE FILTER AFTER EVERY 12 COLD STARTS OR WHENEVER A YELLOW WARNING SIGNAL INDICATING THE BACKPRESSURE IS 26 INCHES OF WATER IS RECEIVED FROM THE HIBACK ALARM SYSTEM, WHICHEVER OCCURS FIRST. IN ORDER TO ACHIEVE FILTER REGENERATION, THE OPERATOR SHALL OPERATE THE ENGINE AT THE LOAD REQUIRED TO ACHIEVE AN EXHAUST TEMPERATURE ABOVE 662 DEGREES FAHRENHEIT (350 DEGREES C) UNTIL THE BACKPRESSURE MONITORING SYSTEM INDICATES A NORMAL BACK PRESSURE READING.  
[RULE 1303(a)(1)-BACT]
15. THE DIESEL PARTICULATE FILTER SHALL BE CLEANED WHENEVER THE BACKPRESSURE REACHES THE MAXIMUM BACKPRESSURE LIMIT SPECIFIED IN CONDITION NO. 11. CLEANING SHALL BE PERFORMED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS IN THE INSTALLATION AND MAINTENANCE MANUAL.  
[RULE 1303(a)(1)-BACT]
16. AFTER EVERY 2500 HOURS OF NORMAL ENGINE OPERATION, THE OPERATOR SHALL INSPECT THE INTEGRITY OF THE DIESEL PARTICULATE FILTER AND, IF NECESSARY, REPLACE IT.  
[RULE 1303(a)(1)-BACT]
17. THE OPERATOR SHALL MAINTAIN RECORDS OF DIESEL PARTICULATE FILTER INSPECTIONS, REPLACEMENTS AND CLEANING FOR A MINIMUM OF FIVE YEARS. THE RECORDS SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.  
[RULE 1303(a)(1)-BACT, RULE 3004]
18. THE OPERATOR SHALL MAINTAIN MONTHLY RECORDS OF EXHAUST TEMPERATURE, ENGINE BACK PRESSURE, DATE AND TIME FOR THE DUTY CYCLE OF THE ENGINE AS RECORDED BY THE HIBACK DATA LOGGING AND ALARM SYSTEM FOR A MINIMUM OF FIVE YEARS. THESE RECORDS SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.  
[RULE 1303(a)(1)-BACT, RULE 3004]

### **Emissions and Requirements:**

19. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
PM: RULE 1470



## FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY

### PERMIT TO CONSTRUCT

Permit No. *TBD*  
A/N 509331

#### Equipment Description:

BOILER NO. 1, CB-NEBRASKA, WATERTUBE TYPE, MODEL NO. NB-201D-55, WITH A LOW NOX BURNER, NATCOM, MODEL NO. P-67-G-29-1722, NATURAL GAS FIRED, RATED AT 66.2 MMBTU PER HOUR, FLUE GAS RECIRCULATION, AND 100 HP COMBUSTION AIR BLOWER.

#### Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. THIS BOILER SHALL BE FIRED WITH NATURAL GAS ONLY.  
[RULE 1303(a)(1)-BACT, RULE 1303(b)(2)-OFFSETS]
4. THIS BOILER SHALL EMIT NO MORE THAN 9 PPM OF OXIDES OF NITROGEN (NOX), CALCULATED AS NO<sub>2</sub>, MEASURED BY VOLUME ON A DRY BASIS AT 3% O<sub>2</sub>.  
[RULE 1146, RULE 1303(a)(1)-BACT]
5. THIS BOILER SHALL EMIT NO MORE THAN 100 PPM OF CARBON MONOXIDE (CO), MEASURED BY VOLUME ON A DRY BASIS AT 3% O<sub>2</sub>.  
[RULE 1303(a)(1)-BACT]
6. THE FLUE GAS RECIRCULATION SYSTEM SHALL BE IN FULL USE WHENEVER THE BOILER IS IN OPERATION.  
[RULE 1146, RULE 1303(a)(1)-BACT]
7. THE OPERATOR SHALL INSTALL, OPERATE, AND MAINTAIN IN CALIBRATION A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) TO DEMONSTRATE COMPLIANCE WITH THE NOX EMISSION LIMIT IN CONDITION NO. 4. THE CEMS SHALL BE INSTALLED AND OPERATING NO LATER THAN 90 DAYS AFTER THE INITIAL START-UP OF THE BOILER, IN ACCORDANCE WITH AN APPROVED AQMD RULE 218 CEMS PLAN APPLICATION. THE OPERATOR SHALL NOT INSTALL THE CEMS PRIOR TO RECEIVING INITIAL APPROVAL FROM THE AQMD. THE CEMS SHALL UNDERGO A SERIES OF CERTIFICATION TESTS WITHIN 90 DAYS OF ITS INSTALLATION.





## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

THE CEMS SHALL MEASURE AND RECORD OVER A FIFTEEN-MINUTE AVERAGING TIME PERIOD, THE NOX AND O<sub>2</sub> CONCENTRATIONS, ON A DRY BASIS, OF THE BOILER EXHAUST. THE CEMS SHALL ALSO CONVERT THE ACTUAL NOX CONCENTRATION TO CORRECTED CONCENTRATION AT 15% OXYGEN, ON A DRY BASIS, AND CONTINUOUSLY RECORD THE CORRECTED STACK NOX CONCENTRATION. THE OPERATOR SHALL MAINTAIN MAINTENANCE AND EMISSION RECORDS.  
[RULE 218, RULE 1146]

8. THE BOILER SHALL BE EQUIPPED WITH A NON-RESETTABLE TOTALIZING GAS METER TO INDICATE THE TOTAL NATURAL GAS CONSUMPTION BY THE EQUIPMENT.  
[RULE 1303(b)(2)-OFFSETS, RULE 1304]
9. THE NATURAL GAS CONSUMPTION FOR THIS EQUIPMENT SHALL NOT EXCEED 42,160,000 CUBIC FEET IN ANY ONE CALENDAR MONTH.  
[RULE 1303(b)(2)-OFFSETS, RULE 1304]
10. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL CONDUCT SOURCE TESTS ON THE EQUIPMENT UNDER THE FOLLOWING CONDITIONS:
  - A. SOURCE TESTING SHALL BE CONDUCTED WITHIN 60 DAYS AFTER INITIAL START-UP OR WITHIN 60 DAYS AFTER RECEIPT OF THIS PERMIT, UNLESS OTHERWISE APPROVED IN WRITING BY THE EXECUTIVE OFFICER.
  - B. THE SOURCE TESTS SHALL BE PERFORMED TO VERIFY COMPLIANCE WITH THE NOX AND CO EMISSION LIMITS SPECIFIED IN CONDITION NOS. 4 AND 5, RESPECTIVELY.
  - C. THE SOURCE TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH SCAQMD METHOD 100.1.
  - D. THE TESTS SHALL BE CONDUCTED WHILE THE BOILER IS OPERATING AT MAXIMUM, MINIMUM, AND NORMAL FIRING RATES. THE SAMPLING TIMES SHALL BE AT LEAST 15 CONSECUTIVE MINUTES FOR MAXIMUM AND MINIMUM LOADS AND AT LEAST ONE HOUR FOR NORMAL OPERATING LOAD.
  - E. WRITTEN NOTICE OF THE SOURCE TESTS SHALL BE SUBMITTED TO THE DISTRICT (ADDRESSED TO ATTN: VICKY LEE, SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, P.O. BOX 4941, DIAMOND BAR, CA 91765) AT LEAST 14 DAYS PRIOR TO TESTING SO THAT AN OBSERVER MAY BE PRESENT.
  - F. TWO COMPLETE COPIES OF THE SOURCE TEST REPORTS SHALL BE SUBMITTED TO THE DISTRICT (ADDRESSED TO ATTN: VICKY LEE, SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, P.O. BOX 4941, DIAMOND BAR, CA 91765), REFERENCING APPLICATION NOS. 509331, 509333, AND 509334, WITHIN 45 DAYS AFTER THE TEST IS COMPLETED. THE REPORT SHALL INCLUDE, BUT NOT BE



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

LIMITED TO EMISSIONS RATES IN POUNDS PER HOUR AND CONCENTRATIONS IN PPMV AT THE OUTLET OF THE BOILER, MEASURED ON A DRY BASIS AT 3% OXYGEN. THE FOLLOWING OPERATING DATA SHALL ALSO BE INCLUDED FOR EACH FIRING RATE:

- I. THE EXHAUST FLOW RATES, IN ACTUAL CUBIC FEET PER MINUTE (ACFM),
- II. THE FIRING RATES, IN BTU PER HOUR,
- III. THE EXHAUST TEMPERATURE, IN DEGREES F,
- IV. THE OXYGEN CONTENT OF THE EXHAUST GASES, IN PERCENT, AND
- V. THE FUEL FLOW RATE.

[RULE 1146, RULE 1303(a)(1)-BACT]

11. A CONTRACTOR APPROVED UNDER THE DISTRICT LABORATORY APPROVAL PROGRAM IN THE REQUIRED TEST METHODS FOR CRITERIA POLLUTANTS TO BE MEASURED, AND IN COMPLIANCE WITH RULE 304 (NO CONFLICT OF INTEREST) SHALL CONDUCT THE TESTS.  
[RULE 304, RULE 1146]
12. SAMPLING FACILITIES SHALL COMPLY WITH THE DISTRICT GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES, PURSUANT TO RULE 217.  
[RULE 217]
13. THIS BOILER SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF RULE 1146.  
[RULE 1146]
14. THE OPERATOR SHALL MAINTAIN ADEQUATE RECORDS TO VERIFY COMPLIANCE WITH ALL CONDITIONS SPECIFIED IN THIS PERMIT. ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED AT THE FACILITY FOR A MINIMUM OF FIVE YEARS AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.  
[RULE 3004]
15. THE OPERATOR SHALL NOT OPERATE THIS EQUIPMENT UNTIL THE OPERATION OF THE BOILER BEING REPLACED, PERMITTED UNDER G6772 IS PERMANENTLY REMOVED FROM SERVICE.  
[RULE 1304(c)(2)]



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**FACILITY PERMIT TO OPERATE  
CAL INST OF TECHNOLOGY**

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Emissions and Requirements:

16. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NO<sub>x</sub>: 9 PPMV, RULE 1146  
CO: 400 PPMV, RULE 1146  
CO: 2000 PPMV, RULE 407  
SO<sub>x</sub>: 500 PPMV, RULE 407  
PM: 0.1 GR/SCF, RULE 409



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

### **PERMIT TO CONSTRUCT**

**Permit No. TBD  
A/N 509333**

#### **Equipment Description:**

BOILER NO. 2, CB-NEBRASKA, WATERTUBE TYPE, MODEL NO. NB-201D-55, WITH A LOW NOX BURNER, NATCOM, MODEL NO. P-67-G-29-1722, NATURAL GAS FIRED, RATED AT 66.2 MMBTU PER HOUR, FLUE GAS RECIRCULATION, AND 100 HP COMBUSTION AIR BLOWER.

#### **Conditions:**

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. THIS BOILER SHALL BE FIRED WITH NATURAL GAS ONLY.  
[RULE 1303(a)(1)-BACT, RULE 1303(b)(2)-OFFSETS]
4. THIS BOILER SHALL EMIT NO MORE THAN 9 PPM OF OXIDES OF NITROGEN (NOX), CALCULATED AS NO<sub>2</sub>, MEASURED BY VOLUME ON A DRY BASIS AT 3% O<sub>2</sub>.  
[RULE 1146, RULE 1303(a)(1)-BACT]
5. THIS BOILER SHALL EMIT NO MORE THAN 100 PPM OF CARBON MONOXIDE (CO), MEASURED BY VOLUME ON A DRY BASIS AT 3% O<sub>2</sub>.  
[RULE 1303(a)(1)-BACT]
6. THE FLUE GAS RECIRCULATION SYSTEM SHALL BE IN FULL USE WHENEVER THE BOILER IS IN OPERATION.  
[RULE 1146, RULE 1303(a)(1)-BACT]
7. THE OPERATOR SHALL INSTALL, OPERATE, AND MAINTAIN IN CALIBRATION A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) TO DEMONSTRATE COMPLIANCE WITH THE NOX EMISSION LIMIT IN CONDITION NO. 4. THE CEMS SHALL BE INSTALLED AND OPERATING NO LATER THAN 90 DAYS AFTER THE INITIAL START-UP OF THE BOILER, IN ACCORDANCE WITH AN APPROVED AQMD RULE 218 CEMS PLAN APPLICATION. THE OPERATOR SHALL NOT INSTALL THE CEMS PRIOR TO RECEIVING INITIAL APPROVAL FROM THE AQMD. THE CEMS SHALL UNDERGO A SERIES OF CERTIFICATION TESTS WITHIN 90 DAYS OF ITS INSTALLATION.



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

- THE CEMS SHALL MEASURE AND RECORD OVER A FIFTEEN-MINUTE AVERAGING TIME PERIOD, THE NOX AND O2 CONCENTRATIONS, ON A DRY BASIS, OF THE BOILER EXHAUST. THE CEMS SHALL ALSO CONVERT THE ACTUAL NOX CONCENTRATION TO CORRECTED CONCENTRATION AT 15% OXYGEN, ON A DRY BASIS, AND CONTINUOUSLY RECORD THE CORRECTED STACK NOX CONCENTRATION. THE OPERATOR SHALL MAINTAIN MAINTENANCE AND EMISSION RECORDS.  
[RULE 218, RULE 1146]
8. THE BOILER SHALL BE EQUIPPED WITH A NON-RESETTABLE TOTALIZING GAS METER TO INDICATE THE TOTAL NATURAL GAS CONSUMPTION BY THE EQUIPMENT.  
[RULE 1303(b)(2)-OFFSETS, RULE 1304]
  9. THE NATURAL GAS CONSUMPTION FOR THIS EQUIPMENT SHALL NOT EXCEED 42,160,000 CUBIC FEET IN ANY ONE CALENDAR MONTH.  
[RULE 1303(b)(2)-OFFSETS, RULE 1304]
  10. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL CONDUCT SOURCE TESTS ON THE EQUIPMENT UNDER THE FOLLOWING CONDITIONS:
    - A. SOURCE TESTING SHALL BE CONDUCTED WITHIN 60 DAYS AFTER INITIAL START-UP OR WITHIN 60 DAYS AFTER RECEIPT OF THIS PERMIT, UNLESS OTHERWISE APPROVED IN WRITING BY THE EXECUTIVE OFFICER.
    - B. THE SOURCE TESTS SHALL BE PERFORMED TO VERIFY COMPLIANCE WITH THE NOX AND CO EMISSION LIMITS SPECIFIED IN CONDITION NOS. 4 AND 5, RESPECTIVELY.
    - C. THE SOURCE TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH SCAQMD METHOD 100.1.
    - D. THE TESTS SHALL BE CONDUCTED WHILE THE BOILER IS OPERATING AT MAXIMUM, MINIMUM, AND NORMAL FIRING RATES. THE SAMPLING TIMES SHALL BE AT LEAST 15 CONSECUTIVE MINUTES FOR MAXIMUM AND MINIMUM LOADS AND AT LEAST ONE HOUR FOR NORMAL OPERATING LOAD.
    - E. WRITTEN NOTICE OF THE SOURCE TESTS SHALL BE SUBMITTED TO THE DISTRICT (ADDRESSED TO ATTN: VICKY LEE, SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, P.O. BOX 4941, DIAMOND BAR, CA 91765) AT LEAST 14 DAYS PRIOR TO TESTING SO THAT AN OBSERVER MAY BE PRESENT.
    - F. TWO COMPLETE COPIES OF THE SOURCE TEST REPORTS SHALL BE SUBMITTED TO THE DISTRICT (ADDRESSED TO ATTN: VICKY LEE, SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, P.O. BOX 4941, DIAMOND BAR, CA 91765), REFERENCING APPLICATION NOS. 509331, 509333, AND 509334, WITHIN 45 DAYS AFTER THE TEST IS COMPLETED. THE REPORT SHALL INCLUDE, BUT NOT BE



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

LIMITED TO EMISSIONS RATES IN POUNDS PER HOUR AND CONCENTRATIONS IN PPMV AT THE OUTLET OF THE BOILER, MEASURED ON A DRY BASIS AT 3% OXYGEN. THE FOLLOWING OPERATING DATA SHALL ALSO BE INCLUDED FOR EACH FIRING RATE:

- I. THE EXHAUST FLOW RATES, IN ACTUAL CUBIC FEET PER MINUTE (ACFM),
- II. THE FIRING RATES, IN BTU PER HOUR,
- III. THE EXHAUST TEMPERATURE, IN DEGREES F,
- IV. THE OXYGEN CONTENT OF THE EXHAUST GASES, IN PERCENT, AND
- V. THE FUEL FLOW RATE.

[RULE 1146, RULE 1303(a)(1)-BACT]

11. A CONTRACTOR APPROVED UNDER THE DISTRICT LABORATORY APPROVAL PROGRAM IN THE REQUIRED TEST METHODS FOR CRITERIA POLLUTANTS TO BE MEASURED, AND IN COMPLIANCE WITH RULE 304 (NO CONFLICT OF INTEREST) SHALL CONDUCT THE TESTS.  
[RULE 304, RULE 1146]
12. SAMPLING FACILITIES SHALL COMPLY WITH THE DISTRICT GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES, PURSUANT TO RULE 217.  
[RULE 217]
13. THIS BOILER SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF RULE 1146.  
[RULE 1146]
14. THE OPERATOR SHALL MAINTAIN ADEQUATE RECORDS TO VERIFY COMPLIANCE WITH ALL CONDITIONS SPECIFIED IN THIS PERMIT. ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED AT THE FACILITY FOR A MINIMUM OF FIVE YEARS AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.  
[RULE 3004]
15. THE OPERATOR SHALL NOT OPERATE THIS EQUIPMENT UNTIL THE OPERATION OF THE BOILER BEING REPLACED, PERMITTED UNDER F53892 IS PERMANENTLY REMOVED FROM SERVICE.  
[RULE 1304(c)(2)]



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## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

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Emissions and Requirements:

16. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NO<sub>x</sub>: 9 PPMV, RULE 1146  
CO: 400 PPMV, RULE 1146  
CO: 2000 PPMV, RULE 407  
SO<sub>x</sub>: 500 PPMV, RULE 407  
PM: 0.1 GR/SCF, RULE 409



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

### **PERMIT TO CONSTRUCT**

**Permit No. TBD  
A/N 509334**

#### **Equipment Description:**

BOILER NO. 3, CB-NEBRASKA, WATERTUBE TYPE, MODEL NO. NB-201D-55, WITH A LOW NOX BURNER, NATCOM, MODEL NO. P-67-G-29-1722, NATURAL GAS FIRED, RATED AT 66.2 MMBTU PER HOUR, FLUE GAS RECIRCULATION, AND 100 HP COMBUSTION AIR BLOWER.

#### **Conditions:**

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.  
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. THIS BOILER SHALL BE FIRED WITH NATURAL GAS ONLY.  
[RULE 1303(a)(1)-BACT, RULE 1303(b)(2)-OFFSETS]
4. THIS BOILER SHALL EMIT NO MORE THAN 9 PPM OF OXIDES OF NITROGEN (NOX), CALCULATED AS NO<sub>2</sub>, MEASURED BY VOLUME ON A DRY BASIS AT 3% O<sub>2</sub>.  
[RULE 1146, RULE 1303(a)(1)-BACT]
5. THIS BOILER SHALL EMIT NO MORE THAN 100 PPM OF CARBON MONOXIDE (CO), MEASURED BY VOLUME ON A DRY BASIS AT 3% O<sub>2</sub>.  
[RULE 1303(a)(1)-BACT]
6. THE FLUE GAS RECIRCULATION SYSTEM SHALL BE IN FULL USE WHENEVER THE BOILER IS IN OPERATION.  
[RULE 1146, RULE 1303(a)(1)-BACT]
7. THE OPERATOR SHALL INSTALL, OPERATE, AND MAINTAIN IN CALIBRATION A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) TO DEMONSTRATE COMPLIANCE WITH THE NOX EMISSION LIMIT IN CONDITION NO. 4. THE CEMS SHALL BE INSTALLED AND OPERATING NO LATER THAN 90 DAYS AFTER THE INITIAL START-UP OF THE BOILER, IN ACCORDANCE WITH AN APPROVED AQMD RULE 218 CEMS PLAN APPLICATION. THE OPERATOR SHALL NOT INSTALL THE CEMS PRIOR TO RECEIVING INITIAL APPROVAL FROM THE AQMD. THE CEMS SHALL UNDERGO A SERIES OF CERTIFICATION TESTS WITHIN 90 DAYS OF ITS INSTALLATION.





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**FACILITY PERMIT TO OPERATE  
CAL INST OF TECHNOLOGY**

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THE CEMS SHALL MEASURE AND RECORD OVER A FIFTEEN-MINUTE AVERAGING TIME PERIOD, THE NOX AND O<sub>2</sub> CONCENTRATIONS, ON A DRY BASIS, OF THE BOILER EXHAUST. THE CEMS SHALL ALSO CONVERT THE ACTUAL NOX CONCENTRATION TO CORRECTED CONCENTRATION AT 15% OXYGEN, ON A DRY BASIS, AND CONTINUOUSLY RECORD THE CORRECTED STACK NOX CONCENTRATION. THE OPERATOR SHALL MAINTAIN MAINTENANCE AND EMISSION RECORDS.  
[RULE 218, RULE 1146]

8. THE BOILER SHALL BE EQUIPPED WITH A NON-RESETTABLE TOTALIZING GAS METER TO INDICATE THE TOTAL NATURAL GAS CONSUMPTION BY THE EQUIPMENT.  
[RULE 1303(b)(2)-OFFSETS, RULE 1304]
9. THE NATURAL GAS CONSUMPTION FOR THIS EQUIPMENT SHALL NOT EXCEED 42,160,000 CUBIC FEET IN ANY ONE CALENDAR MONTH.  
[RULE 1303(b)(2)-OFFSETS, RULE 1304]
10. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL CONDUCT SOURCE TESTS ON THE EQUIPMENT UNDER THE FOLLOWING CONDITIONS:
  - A. SOURCE TESTING SHALL BE CONDUCTED WITHIN 60 DAYS AFTER INITIAL START-UP OR WITHIN 60 DAYS AFTER RECEIPT OF THIS PERMIT, UNLESS OTHERWISE APPROVED IN WRITING BY THE EXECUTIVE OFFICER.
  - B. THE SOURCE TESTS SHALL BE PERFORMED TO VERIFY COMPLIANCE WITH THE NOX AND CO EMISSION LIMITS SPECIFIED IN CONDITION NOS. 4 AND 5, RESPECTIVELY.
  - C. THE SOURCE TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH SCAQMD METHOD 100.1.
  - D. THE TESTS SHALL BE CONDUCTED WHILE THE BOILER IS OPERATING AT MAXIMUM, MINIMUM, AND NORMAL FIRING RATES. THE SAMPLING TIMES SHALL BE AT LEAST 15 CONSECUTIVE MINUTES FOR MAXIMUM AND MINIMUM LOADS AND AT LEAST ONE HOUR FOR NORMAL OPERATING LOAD.
  - E. WRITTEN NOTICE OF THE SOURCE TESTS SHALL BE SUBMITTED TO THE DISTRICT (ADDRESSED TO ATTN: VICKY LEE, SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, P.O. BOX 4941, DIAMOND BAR, CA 91765) AT LEAST 14 DAYS PRIOR TO TESTING SO THAT AN OBSERVER MAY BE PRESENT.
  - F. TWO COMPLETE COPIES OF THE SOURCE TEST REPORTS SHALL BE SUBMITTED TO THE DISTRICT (ADDRESSED TO ATTN: VICKY LEE, SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, P.O. BOX 4941, DIAMOND BAR, CA 91765), REFERENCING APPLICATION NOS. 509331, 509333, AND 509334, WITHIN 45 DAYS AFTER THE TEST IS COMPLETED. THE REPORT SHALL INCLUDE, BUT NOT BE



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

LIMITED TO EMISSIONS RATES IN POUNDS PER HOUR AND CONCENTRATIONS IN PPMV AT THE OUTLET OF THE BOILER, MEASURED ON A DRY BASIS AT 3% OXYGEN. THE FOLLOWING OPERATING DATA SHALL ALSO BE INCLUDED FOR EACH FIRING RATE:

- I. THE EXHAUST FLOW RATES, IN ACTUAL CUBIC FEET PER MINUTE (ACFM),
- II. THE FIRING RATES, IN BTU PER HOUR,
- III. THE EXHAUST TEMPERATURE, IN DEGREES F,
- IV. THE OXYGEN CONTENT OF THE EXHAUST GASES, IN PERCENT, AND
- V. THE FUEL FLOW RATE.

[RULE 1146, RULE 1303(a)(1)-BACT]

11. A CONTRACTOR APPROVED UNDER THE DISTRICT LABORATORY APPROVAL PROGRAM IN THE REQUIRED TEST METHODS FOR CRITERIA POLLUTANTS TO BE MEASURED, AND IN COMPLIANCE WITH RULE 304 (NO CONFLICT OF INTEREST) SHALL CONDUCT THE TESTS.  
[RULE 304, RULE 1146]
12. SAMPLING FACILITIES SHALL COMPLY WITH THE DISTRICT GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES, PURSUANT TO RULE 217.  
[RULE 217]
13. THIS BOILER SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF RULE 1146.  
[RULE 1146]
14. THE OPERATOR SHALL MAINTAIN ADEQUATE RECORDS TO VERIFY COMPLIANCE WITH ALL CONDITIONS SPECIFIED IN THIS PERMIT. ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED AT THE FACILITY FOR A MINIMUM OF FIVE YEARS AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.  
[RULE 3004]
15. THE OPERATOR SHALL NOT OPERATE THIS EQUIPMENT UNTIL THE OPERATION OF THE BOILER BEING REPLACED, PERMITTED UNDER F53899 IS PERMANENTLY REMOVED FROM SERVICE.  
[RULE 1304(c)(2)]



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## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

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### **Emissions and Requirements:**

16. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NO<sub>x</sub>: 9 PPMV, RULE 1146  
CO: 400 PPMV, RULE 1146  
CO: 2000 PPMV, RULE 407  
SO<sub>x</sub>: 500 PPMV, RULE 407  
PM: 0.1 GR/SCF, RULE 409



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## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

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### **RULE 219 EQUIPMENT**

#### **Equipment Description:**

RULE 219 EXEMPT EQUIPMENT, REFRIGERATION UNITS

#### **Emissions And Requirements:**

1. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

REFRIGERANT: RULE 1415  
REFRIGERANT: 40CFR 82 SUBPART F



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## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

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### **RULE 219 EQUIPMENT**

#### **Equipment Description:**

RULE 219 EXEMPT EQUIPMENT, REFRIGERANT RECOVERY AND/OR RECYCLING UNITS.

#### **Emissions And Requirements:**

1. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

REFRIGERANT: RULE 1411  
REFRIGERANT: 40CFR 82 SUBPART B



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## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

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### **RULE 219 EQUIPMENT**

#### **Equipment Description:**

RULE 219 EXEMPT EQUIPMENT, COATING EQUIPMENT, LOW USE OR EMISSIONS

#### **Emissions And Requirements:**

1. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

VOC: RULE 1171, SEE APPENDIX B FOR EMISSION LIMITS  
VOC: RULE 1136, SEE APPENDIX B FOR EMISSION LIMITS  
VOC: RULE 109



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## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

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### **RULE 219 EQUIPMENT**

#### **Equipment Description:**

RULE 219 EXEMPT EQUIPMENT, BOILER, > 400,000 BTU/HR BUT < 2 MMBTU/HR.

#### **Emissions And Requirements:**

1. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

PM: 0.1 gr/scf, RULE 409  
NOx: 30 PPMV, RULE 1146.2  
CO: 400 PPMV, RULE 1146.2  
CO: 2000 PPMV, RULE 407



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## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

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### **RULE 219 EQUIPMENT**

#### **Equipment Description:**

RULE 219 EXEMPT EQUIPMENT, FIRE EXTINGUISHING EQUIPMENT

#### **Emissions And Requirements:**

1. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

HALON:            RULE 1418





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## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

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### **RULE 219 EQUIPMENT**

#### **Equipment Description:**

RULE 219 EXEMPT EQUIPMENT, PRINTING EQUIPMENT, LOW USE OR EMISSIONS, WITH RELATED COATING, LAMINATING AND DRYING EQUIPMENT.

#### **Emissions And Requirements:**

- I. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

VOC: RULE 1130, SEE APPENDIX B FOR EMISSION LIMITS

VOC: RULE 1171, SEE APPENDIX B FOR EMISSION LIMITS



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## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

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### **RULE 219 EQUIPMENT**

#### **Equipment Description:**

RULE 219 EXEMPT EQUIPMENT, COATING EQUIPMENT, PORTABLE, ARCHITECTURAL COATINGS.

#### **Periodic Monitoring:**

1. THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):  
  
FOR ARCHITECTURAL APPLICATIONS WHERE NO THINNERS, REDUCERS, OR OTHER VOC CONTAINING MATERIALS ARE ADDED, MAINTAIN SEMI-ANNUAL RECORDS OF ALL COATINGS CONSISTING OF (a) COATING TYPE, (b) VOC CONTENT AS SUPPLIED IN GRAMS PER LITER (g/l) OF MATERIALS FOR LOW-SOLIDS COATINGS, (c) VOC CONTENT AS SUPPLIED IN g/l OF COATING, LESS WATER AND EXEMPT SOLVENT, FOR OTHER COATING.  
  
FOR OTHER ARCHITECTURAL APPLICATIONS WHERE THINNERS, REDUCERS, OR OTHER VOC CONTAINING MATERIALS ARE ADDED, MAINTAIN DAILY RECORDS FOR EACH COATING CONSISTING OF (a) COATING TYPE, (b) VOC CONTENT AS APPLIED IN GRAMS PER LITER (g/l) OF MATERIALS USED FOR LOW-SOLIDS COATINGS' (c) VOC CONTENT AS APPLIED IN g/l OF COATING, LESS WATER AND EXEMPT SOLVENT, FOR OTHER COATING.

[RULE 3004 (a) (4)]

#### **Emissions And Requirements:**

2. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
  
VOC: RULE 1113, SEE APPENDIX B FOR EMISSION LIMITS  
VOC: RULE 1171, SEE APPENDIX B FOR EMISSION LIMITS



## **FACILITY PERMIT TO OPERATE CAL INST OF TECHNOLOGY**

### **RULE 219 EQUIPMENT**

#### **Equipment Description:**

RULE 219 EXEMPT EQUIPMENT, NEGATIVE AIR MACHINES

#### **Periodic Monitoring:**

1. FOR EACH COMMERCIAL ABATEMENT PROJECT, THE NEGATIVE AIR MACHINE(S) EXHAUST SHALL BE LOCATED A MINIMUM OF 3 METERS (10 FEET) FROM THE NEAREST RECEPTOR (ANY LOCATION WHERE THE PUBLIC CAN BE EXPOSED TO ASBESTOS FIBER EMISSIONS) AND SHALL BE LOCATED AT LEAST 10 FEET ABOVE THE GROUND.  
[RULE 1403]
2. FOR EACH COMMERCIAL ABATEMENT PROJECT, LOCATED MORE THAN 3 METERS (10 FEET) BUT LESS THAN 30 METERS (98 FEET) FROM ANY RESIDENTIAL ZONING, THE NEGATIVE AIR MACHINE(S) SHALL NOT EXHAUST MORE THAN A COMBINED TOTAL OF 4.8 MILLION CUBIC FEET OF AIR (THE TOTAL RATED AIR FLOW OF ALL MACHINE(S) IN CUBIC FEET PER MINUTE MULTIPLIED BY THE TOTAL NUMBER OF WORKING HOURS INVOLVING ASBESTOS REMOVAL).  
[RULE 1403]
3. FOR EACH COMMERCIAL ABATEMENT PROJECT, LOCATED GREATER THAN OR EQUAL TO 30 METERS (98 FEET) FROM ANY RESIDENTIAL ZONING, THE NEGATIVE AIR MACHINE(S) SHALL NOT EXHAUST AIR IN WHICH THE COMBINED TOTAL AIR VOLUME (THE TOTAL RATED AIR FLOW OF ALL MACHINE(S) IN CUBIC FEET PER MINUTE MULTIPLIED BY THE TOTAL NUMBER OF WORKING HOURS INVOLVING ASBESTOS REMOVAL) WILL EXCEED THE AMOUNT SPECIFIED ON TABLE 1.  
[RULE 1403]

#### **Emissions And Requirements:**

4. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

ASBESTOS: RULE 1403